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Troy V. Post chairman Greatamerica Corp. of Dallas, largest U.S. insurance holding company, buys big block of Los Angeles' First Western Bank & Trust Co. stock placed on market by Western Bancorporation to satisfy antitrust decree. BM N Jan 46

Rudolph A. Peterson vice chairman of Bank of America assigned management post under President S. Clark Beise. Rejoined bank in 1961 with understanding he would have inside track to the top job after posts with Transamerica Corp. and Bank of Hawaii. p. BM Mar 56

James S. Rockefeller chairman of First National City Bank steps into controversy on bank plan to pool individual investment accounts involving regulation dispute between SEC and Comptroller of the Currency. p. BM May 82

Chairman Harold Helm of Chemical Bank New York Trust Co. hopes to win FRB approval for acquisition of suburban Rockville Centre Trust Co. p. BM May 82

Drift to Thrift. Discusses resurgence of thrift in past two years, with big increase in individual savings in thrift institutions due to investors switching out of stocks after 1962 stock market collapse and rising interest rates fostered by Federal Reserve's relaxing Regulation Q. Commercial banks issues certificates of deposit to encourage stable savings accounts. Mutual banks join Federal Home Loan Bank System. PI Jul 261-264

Samuel H. Woolley president of the Bank of New York also named chief executive officer succeeding the late Albert Simmonds. p. BM Aug 70

Jackie Robinson to be chairman of proposed Freedom National Bank in New York's Harlem. Bank expects to do business with corporations selling products to Negroes. p. BM Aug 75

Fortune Directory. Annual review of 50 largest U.S. commercial banks, relative 1962 rank in earnings, assets, deposits, capital funds, table. Aug 144

What's Rocking Those Rocks, the Banks. Robert Sheehan reviews ferment in commercial banks to liberalize conflicting federal and state regulations hampering growth; discusses proposals, including C.M.C. study and Comptroller of the Currency Saxon's national bank report, to relax laws on services and branching, centralize regulatory agencies (FRB, FDIC). Inequities of present system shown in three main money centers. Merger obstacles, deposit competition, and California's leading independent banks noted. Trend in number of banks, deposits, 1946-62, charts. Oct 108-113, 242-246

Where They Keep the Money. Portfolio of colored photographs by Ulf F. Wahlstrom shows how bank vaults are made at Mosler Safe Co. Oct 114-117

Rudolph A. Peterson succeeds S. Clark Beise retiring as president of Bank of America, Crocker-Anglo president Emmett G. Solomon heads Crocker-Citizens National Bank as result of merger with Los Angeles Citizens National. New bank fourth largest on West Coast, p. BM Dec 66

Six banks led by Boston's First National agree to new $35-million financing plan for Curtis Publishing Co. BM Dec 72

Japan

Japan: The Open Door with a Catch. Louis Banks analyzes Japan's moves to liberalize foreign trade and foreign investment regulations in terms of probable effect on free-world business, three-sided debate involving resurgent zaibatsu banking combines advocating revival of cartels. c.p. Jul 134-141, 266-278

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Yusuf Bedas develops Intra Bank, S.A., founded as currency-exchange shop in Beirut fifteen years ago, into leading bank of Arab world with numerous branches in Middle East, Africa, Europe, Brazil. BG Apr 66

BANKS, LOUIS (AUTHOR)

Japan: The Open Door with a Catch. Analyzes Japan's moves to liberalize foreign trade and stiff foreign investment restrictions in terms of probable effect on free-world business. Jul 134-141, 266-278

BARGES & TOWBOATS

Angela, first of two seagoing barges for bulk cement, designed by H. C. Downer Associates, Inc. and built by Avondale Shipyards for Moran Towing Corp. p. Pr Feb 159

Busy Days on the Big Muddy. Portfolio of paintings by Robert A. Parker of Missouri River boats and barges with notes on recent big increase in commercial freight; Sioux City & New Orleans Barge Lines biggest operator. Nov 154-159

Floating pipeline system or direct pump-out of silt and mud to keep Delaware River channel clear, devised by Army's Corps of Engineers, p. Pr Nov 189

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Chairman Arthur B. Homer announces new integrated finishing plant at Burns Harbor, Ind. midwest market move made after Justice Department rejects Youngstown Sheet & Tube merger. p. BM Jan 40
Stewart S. Cort, Pacific Coast Division vice president, elected president of corporation, replaces Edmund F. Martin named vice chairman. Chairman Arthur B. Homer remains chief executive. p. BM Sep 60

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BOBBIE BROOKS, INC.
$100 Million in "Rags". Seymour Freedgood reports Bobbie Brooks, Inc. and Jonathan Logan, Inc. at top of women's outerwear industry as result of meeting 1950s demand for moderately-priced casual and sportswear and adoption of modern management practices. BBK tightly centralized under Maurice Saltzman. c.p. May 151-162

BOEHM, GEORGE A. W. (AUTHOR)
That Wonderful Machine, the Brain. Reviews new integrated approach in research on brain functions and behavior reuniting physiology and psychology. Feb. 125-129, 184-192
Reliability Engineering. Reports on new approach in quality control, basic concepts employing reliability number derived from testing and statistical mathematical probability; growing applications in defense contracts, industry. Apr 124-127, 181-186
Bringing Engineers Up to Date. Reviews new retraining courses to update engineers in management. Basic new scientific concepts and engineering theory needed to understand and direct younger specialists, inaugurated by U.C.L.A. with six-week cram course and adapted by G. E. for company staff. May 120-121, 179-180
Tapping Nature's Storehouse of Violent Energy. Reviews rapid growth of plasma physics, new major field of fundamental research in thermonuclear plasma. Aug 130-134, 220-227
Inexhaustible Riches from the Sea. Reviews surge of scientific interest in oceanographic research, storehouse of new wealth in minerals and cheap food, Kennedy Administration ten-year government coordinated program, rising commercial interest. Dec 132-137, 218-229

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BOOKS
Italsider, Italian steel company, commissions best Italian artists to illustrate books as Christmas gifts for employees. Noted in **Steel Company in the World of Culture.** Oct 140-141
American Economic Republic by Adolf Berle. John Davenport reviews new rationale and guide on modern U.S. economy. Jun 94, 236
Crisis in Black and White by Charles E. Silberman source of FORTUNE article **Businessman and the Negro.** Sep 98
Economics of the Free Society by Wilhem Roepke. Editorial reviews new economics text emphasizing moral values, critique of Keynes and followers. Contrasted to popular student text of M.I.T.'s Paul Samuelson blurring role of individual. **Alpine View of Economics.** Apr 84
Economics of Trade Unions by Albert Rees. Opinions cited in FORTUNE article **Labor Unions Are Worth the Price.** May 240
Enterprising Americans. FORTUNE series **History of American Business.** Feb 82
Investment Companies. Mutual Funds and Other Types by Mrs. Lucile T. Wessmann authoritative source book for U.S. investment companies. **Lady and the Funds.** PI Nov 248
On the Accuracy of Economic Observations by Oskar Morgenstern, a complete revision of *Theory of Games and Economic Behavior*, analyzes inaccuracies in economic statistical data. Condensed in FORTUNE article **"Qui Numerare Incipit Errare Incipit."** Oct. 142-144, 173-180

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BRADY, HAROLD S. See UNITED STATES SMELTING, REFINING & MINING CO.

BRAIN
That Wonderful Machine, the Brain. George A. W. Boehm reviews new integrated approach in research on brain functions and behavior. Discusses wide variety of experiments by university teams, new tools and techniques result in new theories, shift in treatment of mental diseases, split-brain operation, diagrams. Feb 125-129, 184-192

BRAZIL

See also LATIN AMERICA

Printing-Press Economy. Reports balance-of-payments deficit, depleted gold and foreign exchange, price inflation threatening economic chaos. President Goulart undertakes palliatives. Celso Furtado drafts economic reform plan. Finance Minister San Thiago Dantas seeks aid. U.S. faces quandary. Backward Rio contrasted to modern São Paulo. p. BG Mar 63-75

Israel Klabin, one of Brazil's most responsible young businessmen preoccupied with expansion of family business and healthy economy, is one of four partners and unofficial president of Klabin Irmãos & Co. agricultural and industrial investment combine. p. BG Mar 64

BRAZING GUN See AIRCRAFT INDUSTRY

BRIDGES

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Crossing That Defies the Atlantic. Portfolio of colored photographs illustrates construction of $140 million bridge-tunnel highway across Chesapeake Bay from Cape Charles to Norfolk, Va.; notes on building four islands, two steel-tube tunnels, trestle highway, meeting difficulties of weather and elements, map, drawing. Apr 112-121

265-ton precast-concrete slabs used for roadbed of bridge being built over Lake Ponchartrain by Brown & Root, Inc. p. Pr Jun 171

First hydraulically operated bascule lift bridge powered by electric motor designed by Barnes & Jarnis, Inc. and Earle F. Allen. Prefabricated H-beams, guard rails, and corrugated steel sheets which can be quickly bolted together by unskilled labor made by Nippon Kokan, K. K., Japan. p. Pr Jul 218, 224

Two Dutch companies cooperate in building pontoon derrick to position concrete pipes for foundations of three-mile long bridge in the Netherlands. p. Pr Dec 187

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C. Michael Paul chief stockholder of A. M. Kidder & Co., brokerage firm selling its assets to Reynolds & Co. and Francis I. du Pont & Co. p. BM Jul 108

Chairman Michael W. McCarthy of Merrill Lynch, Pierce Fenner & Smith Inc. would like firm to go public, requiring change in Stock Exchange rules. Francis I. du Pont & Co. becomes second-largest U.S. brokerage firm as result of A. C. Allyn & Co. merger. p. BM Oct 56

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Who's to Blame for Riklis—Riklis? Reviews setbacks of Meshulam Riklis as board chairman of Rapid-American Corp. and McCrory Corp., with huge debt due to failure to realize projected earnings and McCrory stockholder suits charging conflict of interest. Oct 136-137, 236-240

BROWN & WILLIAMSON TOBACCO CORP. See TOBACCO

BROWN BROTHERS HARRIMAN & CO.

Ex-U.S. Senator Prescott Bush returns as partner, p. BM May 82

BROWN SHOE CO.

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Monte E. Shoemaker becomes chief executive. Current problem is divestiture of subsidiary G. R. Kinney Co. p. BM Mar 56

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BRYANT, SAMUEL W. (AUTHOR)

Keeping Executives Healthy. Describes how Scott Paper Co. developed employee medical program for new headquarters from study of other corporate facilities, outside clinics. Apr 122-123, 134-145

What Jet Travel Does to Your Metabolic Clock. Analyzes fatigue problem involving disruption of bodily cycles in transoceanic jet travel across numerous time zones. Nov 160-163, 183-186

B.S.F. CO. See LIONEL CORP.

BUCHER, FRANCIS R. See GREAT ATLANTIC & PACIFIC TEA CO. Mar 107

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BUICK See GENERAL MOTORS CORP.

BUILDING

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Forecast increase in housing starts through mid-1964, chart. BR Jan 28, 32

Free-span roof for circular restaurant at O'Hare Airport, Chicago, using precast concrete slabs supported by steel suspension cables, topped with flexible butyl rubber designed by C. F. Murphy. Pivoting vacuum grip used to lift Koppers' refrigerated warehouse wall panels of aluminum skin filled with polystyrene, built by Davis Construction Co. p. Pr Jan 145

Prefabricated office made of insulated enameled steel panels which can be erected in half an hour by unskilled labor made by Elwin G. Smith & Co. p. Pr Jan 150

Outlook for bigger upturn in home building, 1959-62, chart. BR Feb 39

Watching 2,600 Miles of Pipeline Grow. Portfolio, commissioned by FORTUNE, of drawings by Paul Hogarth and short report on complex construction of new $350 million Colonial oil pipeline from Houston to New York. Feb 100-109

Future of the Office Building Boom. Daniel Seligman appraises postwar nationwide office-building boom, strength of market discounting current misgivings. Focus on New York world's leading office center, speculative and "monument" builders. City-by-city boomlets outside New York and unique local situations, overbuilding. Skylines, painting. Mar 84-88, 214-223

Logistics of Vertical Transport. Portfolio of photographs by Richard Saunders and brief report on method of moving building materials to upper levels of skeletal structures of skyscrapers with hoists and cranes. Examples in building projects concentrated along New York's Avenue of the Americas. Mar 89-95

New ideas in construction: steel-bar framework of experimental building at Texas A. & M. assembled on ground, lifted with crane, pulled into shape by block and tackle fastened to six supporting legs, then sprayed with concrete. Prestressed and precast concrete slabs by General Dynamics for bakery and freezer. Alcoa polystyrene panels sandwiched between aluminum skins locked together by inserting strip of neoprene used as space dividers. Structural steel framework on outside of building in form of load-bearing walls consisting of diamond-shaped units made by U.S. Steel, p. Pr Mar 160

Housing Raises the Roof. FORTUNE semiannual survey of builders' plans shows strong housing market in 1963, upward revision of previous plans with big rise in apartments, gains in single-family homes over $15,000 and prefabs, but no increase in shells. Estimate on 1960-64 market. Chart on 1958-63 trend. BR Apr 40, 44

Move to Apartments. Daniel Seligman explores apartment market prospects, indications of strong building rate for next decade. Favorable factors are increasing percentage of small childless households, need for more intensive use of urban and suburban land. Discusses builders' current problems, overbuilding of high-rise luxury units, various projects, rental and vacancy rates; charts. Apr 98-101, 221-226

Building sections of galvanized or enamel-coated steel panels made by Lundell Manufacturing Co. hooked into inner lower flanges of steel beams. Splicing clamp for bars used in reinforced-concrete columns to hold ends of bars in alignment made by Gateway-Erectors, Inc. p. Pr May 192

"Monopoly Game". Real-estate boom in Beirut with skyscrapers replacing old houses and ultra-modern apartments studding outskirts, due to investments of Lebanese emigrants and Arab aristocrats. p. BG Jun 76

Where's the Ceiling on New Houses? John McDonald analyzes outlook for builders of single-family houses in 1960's. Hopeful signs are "cluster planning" for efficient land use, new self-sufficient cities, factory house, management builders using modern methods, plastic components, panels. Household formation rate is factor. 1940-60; charts. c.p. Jun 128-132, 216-223

265-ton precast-concrete slabs used for roadbed of bridge being built over Lake Ponchartrain by Brown & Root, Inc. p. Pr Jun 171

Octagonal portable room for use indoors or out, with safety-glass windows and steel wall panels insulated with glass fibre made by Industrial Acoustics Co. p. Pr Jun 172

Forecast nonfarm housing starts rise next 18 months through 1964, 1957-64 chart. Br Jul 42, 46

Hotels: Time to Stop and Rest. Seymour Freedgood appraises hotel-motel building boom with 1962 peak over $1 billion. Notes signs hotel surge is ending with drop in demand, revenues, but pace of motels continues vigorous, financing and investment appeal. Building trend 1945-64, chart. c.p. Jul 162-165, 202-213

Front-end-discharge concrete mixer with twelve-cubic-yard agitator capacity, front-end drive, and completely controlled from cab built by Travel Batcher Corp. p. Pr Aug 176

Solid Housing. FORTUNE semiannual survey of builders forecasts strong housing market through 1964, high level in apartments, increase in prefab houses, recovery in shell-home industry, 1958-64, chart. BR Oct 44, 46

Prefabricated steel stairways which form an accurate guideline for masonry made by Pico Safe Stairs Co. Automatic release beam hook designed to replace cable sling, cutting beam-handling time 20 percent, made by Industrial Metal Fabricators, Inc. p. Pr Oct 188

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BUNCHE, RALPH J.

Comments on FORTUNE article on U.N. intervention in Congo, defends U.N. policy in Letter to Editors. Apr 20

BUNDESBAHN See RAILROADS—GERMANY

BUNKER, GEORGE M. See MARTIN MARIETTA CORP.

BURCK, GILBERT (AUTHOR)

Prime Mover Begins to Move. Collaborating with Sanford S. Parker, Burck projects upswing in capital spending by manufacturing industries for 1963-65 based on FORTUNE index, with industry-by-industry estimates and company plans. Feb 110-114, 208-213

You May Think the Corporate Profit Tax Is "Bad," But . . . Analyzes real defects of corporate income tax neglected in Kennedy Administration tax program, discrimination against efficient corporations and equity capital. States case for liquidation of tax and suggests initial steps. Apr 86-89, 229-240

Balance-of-Payments Bind. Assesses chronic U.S. international deficit now totaling $26 billion, drain on gold endangering dollar and world leadership due to huge outflow of private capital. Suggests prudent monetary policy, competitive export prices as relief measures. Jun 112-117

In Electrical Manufacturing the Word Is "Rationalize". Appraises prospects of Western Europe's electrical equipment manufacturing industry, country-by-country, companies and products, boom expansion 1950-62, world markets, intense exports competition. Sep 110-115, 160-170

Chemicals: The Reluctant Competitors. Reports on fast-growing Western European chemical industry, with competition in intra-European market intensified by new oil and natural gas resources, dismantling of Common Market tariffs, and antitrust regulations. Nov 148-153, 218-228

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BURLINGTON INDUSTRIES, INC.

Charles F. Myers chief executive of one of U.S. companies exceeding $1 billion sales in 1962, p. BM Apr 58

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See also CORPORATIONS; MANAGEMENT

How Rathbone Runs Jersey Standard. Walter Guzzardi Jr.'s closeup account of how president and chief executive of world's largest oil company presides over daily affairs; imperturbable style, independent decision-making due to long training as inside man; drawings. Jan 84-89, 171-179

Joseph P. Kennedy: A Portrait of the Founder. Richard J. Whalen recounts Kennedy's rise as capitalist, drive for money and status for family, business and public career, speculative investment deals in various fields. p. Jan 111-118, 156-168

Edward A. Cudahy Jr. appointed president Cudahy Packing Co. summoned from Arizona cattle ranch. Plans to meet meat-packing industry profit squeeze. p. BM Feb 53

"What the Hell Do Those Fellows Want?" Editorial reviews cool climate of business-government relations due to Kennedy Administration's tendency to employ wide discretionary powers of federal government rather than rule of law, despite New Frontier pro-business policy moves. Feb 81-82

Henry A. Thouron takes over as chief executive of Hercules Powder Co. Company's growth due partly to government contracts in missiles and space. p. BM Mar 51

Businessmen Who Love the Land. Portfolio of colored photographs and notes on leaders in promoting public conservation, legislation, influence in government agencies and private citizens' groups. Mar 114-121

Retiring Chairman Leo D. Welch of Standard Oil of New Jersey and Dr. Joseph V. Charyk appointed chairman and president respectively of Communications Satellite Corp. p. BM Apr 51-58

Optimistic World of Edgar Kaiser. Walter Guzzardi Jr., reports on Edgar Kaiser's vigorous management of Kaiser industrial complex, new stage of growth, foreign ventures. Principles based on virtues, optimism, f.c.p. Apr 90-97, 214-219

FORTUNE semiannual survey of business mood shows rising optimism, 1956-63 chart. BR May 43

President Zach Toms of Liggett & Myers Tobacco Co. named chief executive succeeding Chairman W. A. Blount retired. p. BM May 75

Charles M. Beeghly new chairman and chief executive of Jones & Laughlin Steel Corp., succeeding Avery C. Adams retiring. p. BM Jun 53

Bert Cross new president and chief executive of Minnesota Mining & Manufacturing Co. is a relentless perfectionist dedicated to company. Faces challenge to maintain recent diversification record, sales expansion and profits growth. p. BM Jul 101

Stuart T. Saunders appointed chairman of Pennsylvania Railroad. Brilliant record as head of Norfolk & Western Railway noted; plans to increase Pennsy revenues with more aggressive selling. p. BM Aug 69

Donald Burnham unexpectedly advanced as president and chief executive of Westinghouse Electric Corp. over Executive Vice President John K. Hodnette now vice chairman. Burnham hopes for sharp rise in profit margins with automation. p. BM Sep 59

Donald M. Kendall promoted president and chief executive of Pepsi-Cola succeeding Herbert Barnet. p. BM Oct 55

It's a Spryer Singer. Edmund K. Faltermayer reviews President Donald P. Kircher's vigorous rehabilitation of ossified company since 1958, broad diversification program. c.p. Dec 144-148, 154-168

Argentina

Guy Clutterbuck board chairman of Siam di Tella Ltda., largest private manufacturing complex in Latin America, calmly assesses current recession crisis, 1962 financial and labor troubles. p. BG Feb 66

Brazil

Israel Klabin one of Brazil's most responsible young businessman preoccupied with expansion of family business and the health of economy. One of four family partners and unofficial president of Klabin Irmãos & Co. a collection of agricultural and industrial investments. p. BG Mar 64

Canada

John V. Clyne, board chairman and chief executive of MacMillan, Bloedel & Power River Ltd., reorganizes and modernizes complex of British Columbia timberland, pulp, newsprint, plywood, specialty papers, and corrugated container plants into tight money-making operation. p. BG Dec 82

Europe

Men Behind the Wheels. Portfolio of photographs and notes on Europe's top automobile executives, characteristic differences from Detroit executives, unique management problems, attitudes of thrift and secretiveness. Aug 98-100

Finland

Ako Kihlman chief executive of Oy Tampella AB, one of Finland's leading industrial complexes, urges Finland to reduce trade barriers. Record in reshaping Tampella as international organization in wood products, machinery, textiles, emphasizing exports in open competition. p. BG Aug 80

France

Physicist Maurice Ponte president of Compagnie Générale du Télégraphie Sans Fil, France's largest electronics manufacturer, which stands to prosper if SECAM (memory sequential system) wins current Western Europe debate on choice of color television system. p. BG Sep 76

Germany

Heinrich Jakoff, president of Klöckner Humboldt-Deutz, which he assembled as diversified manufacturing and engineering firm, has two projects under way: truck and bus plant for Egyptian Government and new modern headquarters for Klöckner. Comments on numerous problems disturbing all German managers. p. BG Jul 118

Great Britain

Paul Chambers, board chairman Imperial Chemical Industries, calls in McKinsey & Co., U.S. management consultants, to recoup profits decline and public image dented by clumsy negotiations in costly take-over battle for Courtaulds ending with minority equity. Pushes export sales, heavy spending on new plant and equipment throughout world. p. BG May 88

Italy

Ernesto Manuelli, president and general manager of Finsider, giant Italian steel complex, directs big expansion program to double output to meet growing markets. p. BG Oct 76

Japan

Japan: The Open Door with a Catch. Louis Banks analyzes Japan's moves to liberalize foreign trade and foreign investment restrictions, three-sided debate involving industrialists builders of light industries, bureaucracy, and resurgent zaibatsu industrial and banking combines. c.p. Jul 134-141, 266-278

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Yusuf Bedas develops Intra Bank, S.A., founded as currency exchange shop in Beirut fifteen years ago, into leading bank of Arab world with numerous branches in Middle East, Africa, Europe, Brazil. Answers critics of one-man operation. p. BG Apr 66

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José Bazan, general manager of Colon Free Zone shipping and manufacturing enclave, embarks on big expansion program, p. BG Jun 70

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Eduardo Barreiros Rodriguez skyrockets from mechanics' shop to control of Barreiros Diesel, S.A., sixth-largest industrial corporation in Spain, in little over a decade. Expands venture in modifying truck and bus gasoline engines to run on diesel fuel into manufacturing of engines and, in turn, trucks, buses, and tractors. p. BG Nov 94

BUSINESS ROUNDUP

Forecast for long upswing in economy next 18 months through mid-1964 with $50 billion increase in G.N.P., turn from cyclical to growth economy, steady expansion in capital spending, inventories, home building, government defense and nondefense spending, consumer buying, slight slowdown in prices and wages, income and savings, easy credit, rise in exports, charts. Jan 27-34

Signs of new rapid advance in economy, sales gains overtaking forecasts, big rise in production. FORTUNE quarterly survey indicates big upturn in inventories. Possible tax cut and tighter credit noted. Increased productivity, employment, growth in labor forces forecast, charts. Feb 39-46

Operating profits at new peak at end of 1962, will stimulate capital investment. SEC-Commerce survey indicates dip in outlays. FORTUNE semiannual retailers survey projects continuing rise in consumer spending, demand in various lines, relation to income, saving, credit. Prospect for further increase in federal spending in fiscal 1964, defense and nondefense. Deficit outlook, charts. Mar 39-46

Outlook for no recession in 1963 with renewed rise in investment, capital outlays, based on SEC-Commerce survey. FORTUNE semiannual survey of builders' plans shows strong housing market. Prospects for bigger demand for credit over 1962 peak. Some increase in interest rate expected, charts. Apr 39-46

Decisive rise in employment in response to 1963 business surge. G.N.P. outpaces FRB production index. FORTUNE semiannual survey of business mood shows rising optimism. Six-billion inventory-buying increase estimate exceeds indications of FORTUNE quarterly survey of executives' plans. Perspective on price increases with industrial levels firming and consumer prices at slower rate, charts. May 43-50

Basic forces in economy expanding. New FORTUNE index of industrial pressure measures potential supply and demand. Capital spending plans for 1963, 1964 outstrip FORTUNE semiannual survey. Consumer spending also advances, charts. Jun 39-46

Forecasts $50-billion G.N.P. expansion in economy over next 18 months with rise in capital outlays to $64 billion in 1965. Trend in government and consumer spending, inventories, construction, prices and wages, income and savings, credit, exports. Recovery of past five years with transition to prolonged prosperity in 1964 a historic achievement and challenge to business for greater innovation to expand demand, charts. July 41-48

Near-term signs economy's expansion still gaining momentum. Longer-term prospects uncertain with Administration's new posture endorsing discount rate rise and the accompanying change in credit policy. FORTUNE survey of executives shows broad uptrend in inventory buying. Favorable turn in foreign trade with gains in exports, charts. Aug 31-38

Economy's recent gain is "strongest peacetime upturn of postwar period" with new peak in industrial production, advances in employment, federal

spending, tax receipts cutting deficit. But 1963 uncertainties on tax cut and further credit restraint persist. Second quarter corporate profits at peak rate. Farm cash receipts and equipment spending at record highs, but upsurge in farm prosperity levels off due to rising expenses, unsure future of crop legislation, prices, exports drop, based on findings of FORTUNE annual survey of merchants, manufacturers, bankers, charts. Sep 43-50

Economy shows immense strength in tide of expansion. Question of tightening monetary policy. FORTUNE semiannual retailers survey shows consumer spending at peak rate, projects optimistic sales in various lines. Consumer liquid savings rise. FORTUNE semiannual survey of builders forecasts strong housing market through 1964, charts. Oct 39-46

Latest FORTUNE survey of business mood indicates increasingly optimistic outlook for next twelve months, big sales and capital spending rise, but failure to recognize true scope of economy's expansion with G.N.P. rate probably surpassing $600 billion this quarter. Consumer buying broadens. FORTUNE quarterly inventory survey projects major buying upturn in various lines. Analysis of credit conditions shows bank credit expansion, interest rates edging up and money a little tighter, charts. Nov. 47-54

Prospect for strong wave of expansion with G.N.P. and FRB index outpacing growth of industrial capacity and inventory. Government's fiscal position uncertain in 1964 with another rise in outlays. Balance-of-payments position improves somewhat. Forecast $5 billion advance in capital spending over next year exceeding FORTUNE semiannual capital-goods producers' survey estimates, charts. Dec 49-56

BYNUM, WILLIAM See CARRIER CORP.

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CAB See AIR LINES

CABLE

To string cable across the Naruto Strait of Japan, Sumitomo Electric Industries Ltd. lofts messenger wire with balloons attached at intervals. p. Pr Feb 159

CADILLAC See GENERAL MOTORS CORP.

CAIN, GEORGE R. See ABBOTT LABORATORIES

CALIFORNIA

Invention Sprouts on California's Farms. Portfolio of colored photographs by Joe Munroe and notes on new agricultural machines developed for big ranch crops. Jan 90-99

Strange Leveling Off in Land. Hubert Kay examines flattening out of long national land boom, sales and prices based on FORTUNE survey of 20 metropolitan areas and soundings in 53 others, southern California including Sonoma and Napa Valleys. Oct. 124-129, 214-222

Faces and Prices of the National Estate. Portfolio of colored photographs and notes on size of U.S. national estate, acreage, price range, public domain, Sonoma Valley high prices. Oct 125-127

88,000 Golden Acres Waiting for the Dust to Settle. Seymour Freedgood reports on family-held Irvine Co. controlling 138-square-mile Irvine Ranch which blocks growth of metropolitan Los Angeles. Board of directors struggle over proposed urban development plan. Family tree, chart. Nov 142-147, 252-267

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See also COLLEGES AND UNIVERSITIES

New hillside cyclotron part of Lawrence Radiation Laboratory shown as example of modern architecture trend in college buildings in portfolio of colored photographs **Up from Gothic.** May 145

CALTEX PACIFIC See OIL—INDONESIA

CAMANCHE DAM See DAMS

CAMERAS See PHOTOGRAPHIC EQUIPMENT

CANADA

See also INVESTMENTS, FOREIGN Dec 129

Pearson's Frontier. New Prime Minister Lester Pearson's program to expand stagnant economy being drafted by Cabinet group and Privy Council's Maurice Lamontagne. Proposals to reduce unemployment, develop export industries to meet trade deficit, dollar's decline. More far-reaching schemes include Canada Development Corp. government-sponsored investment fund to check U.S. domination of industry and Economics Council of businessmen and labor leaders to set targets. Municipal Development and Loan Board seeks cooperation of enlightened businessmen. BG Jul 113-125

John V. Clyne, Board Chairman of MacMillan, Bloedel & Powell River Ltd. during past six years, has reorganized and modernized complex of British Columbia timberland, pulp, newsprint, plywood, specialty papers, and corrugated container plants into tight money-making operation. p. BG Dec 82

CANADA DEVELOPMENT CORP. See CANADA

CANCER See TOBACCO

CANON CAMERA See JAPAN Jul 139

CAPES, SAFETY See CLOTHING

CAPITAL See CAPITAL INVESTMENTS; INVESTMENTS; INVESTMENTS, FOREIGN; UNITED STATES—FOREIGN RELATIONS

CAPITAL GAINS TAX See TAXATION

CAPITAL GOODS See CAPITAL INVESTMENTS; ELECTRICAL EQUIPMENT; INDIA Jun 118

CAPITAL INVESTMENTS

See also CORPORATIONS Jun 206, July 177, 262, Nov 119; GENERAL MOTERS CORP. Nov 167; INDIA Jun 118; PITTSTON CO.

FORTUNE survey forecasts accelerated rise in capital spending during next 18 months. BR Jan 27-32

Prime Mover Begins to Move. Crucial Capital-Goods Market IV. Gilbert Burck and Sanford S. Parker project upswing in capital spending by manufacturing industries for 1963-65 based on FORTUNE index, industry-by-industry estimates and company plans. Big factor is peak output gaining on capacity, 1954-65, charts, c.p. Feb 110-114, 208-213

Signs of uptrend in capital outlays despite indication of dip this quarter in last SEC-Commerce survey. BR Mar 39-40

Prospect for new surge in capital outlays in 1963 exceeding latest SEC-Commerce survey, 1960-63, chart. BR Apr 39-40

Investment Marches On. Outlook for sharp rise in capital outlays through second half of 1963, first half of 1964, outstripping FORTUNE semiannual survey of spending plans. Industry-by-industry changes, 1960-64, chart. BR Jun 40, 44

Commerce-SEC survey shows rise in spending, slowdown in fourth quarter 1963 BR Oct 39

FORTUNE's latest survey of manufacturers' plans for capital spending in 1964 shows 8 percent rise over 1963. BR Nov 48

Pressures for Capital. Outlook for advance in capital spending of $5 billion over the next year and $64 billion-rate in 1965 due to mounting pressure on capacity, rising profits. FORTUNE semiannual capital-goods producers' survey expects more modest 4 percent increase, 1960-64, charts. BR Dec 50, 54

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President William Bynum succeeds Chairman Cloud Wampler as chief executive, p. BM Apr 56

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CARTELS See JAPAN

CARTER, WILBERT J. See STEVENS, J. P., & CO., INC.

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CARY, WILLIAM L. See SECURITIES & EXCHANGE COMMISSION

CASELLA, PASQUALE J. See ENDICOTT JOHNSON CORP.

CASH See CORPORATIONS; SAVINGS

CASH REGISTERS See LITTON INDUSTRIES

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Let's Inc. One-act playlet satirizes organization of corporate enterprise with advice of professional management consultant. Jun 210-215

CASTING See STEEL

CASTRO, FIDEL See LATIN AMERICA

CATALYST, HYDROGEN See HYDROGEN

CATERPILLAR TRACTOR CO.

Gentle Bulldozers of Peoria. Gilbert Cross assesses company's record as manufacturer of earthmoving machinery, construction equipment. Notes 1962 profits, huge sales gain over 1941. Discusses management, adhering to old-fashioned operating principles emphasizing quality and reliability of product, under new President William Blackie and Chairman Harmon Eberhard since Louis Neumiller retired to directorship in 1962; foreign operations and expansion. Jul 166-171, 201-202

Moving 11 Million Cubic Yards. Painting by Daniel Schwartz of Caterpillar equipment being used on Camanche Dam construction in California. Jul 168-169

CATTLE FEEDER See AGRICULTURE—EQUIPMENT

CELOTEX CORP. See LOEB, CARL M., RHOADES & CO.

CEMENT

See also BARGES AND TOWBOATS; MARTIN-MARIETTA CORP.

Eruption of Cement on the Hudson. Portfolio of colored photographs by David Plowden and notes on giant new plant of Atlantic Cement Co. along the Hudson River near Albany, N. Y. Joint venture of Cerro Corp. and Newmont Mining Corp. costing $42 million, designed to process 10,000 tons of limestone daily in world's biggest kilns. Jun 126-127

CENTRAL OF GEORGIA RAILWAY See RAILROADS

CERAMIC COATINGS See NORTON CO.

CERRO CORP. See CEMENT

CHAERUL SALEH See INDONESIA, REPUBLIC OF

CHAIN STORES See STORES

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FORTUNE series **History of American Business** published as book *Enterprising Americans.* Feb. 82

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General Aniline Goes Private. Irwin Ross assesses present condition and prospects of General Aniline & Film Corp. pending final sale to private owners by U.S. Government, chief owner since seizure as enemy property in 1942. Notes drawbacks to growth during past 21 years, with interplay of politics and patronage, Kennedy Administration changes, over-cautious management hampering chemical developments. Sep 127-129, 144-156

Chemicals: The Reluctant Competitors. Gilbert Burck reports on fast-growing Western Europe chemical industry, 1953-62 sales increase, with competition in intra-European market intensified by new oil and natural gas resources, dismantling of Common Market tariffs, and antitrust regulations, also "unfair" U.S. protectionist tariff and U.S. companies' moves into Europe. Performance of leading producers, Britain's I.C.I., Germany's Big Three, Italy's new A.N.I.C., new French complex at Lacq, drawings. Nov 148-153, 218-238

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CHINA, COMMUNIST

How Communist Economics Failed in China. Stanley Karnow discusses Red China's failure to forge modern industrial nation with speed-up industrialization plan. Government revises Five-Year Plan targets and production records downward, relaxes political pressures, re-emphasizes agriculture to meet severe food shortage and sets up new rural organization with free-market incentives for peasants. p. Jul 154-157, 230-238

CHINA, NATIONALIST

Our Strongest Ally in the Pacific. Editorial urges new U.S. approach and informed public opinion on strength of Nationalist China, General Chiang's formidable military force ready to liberate Red China. Criticizes Kennedy Administration policy. Jul 130, 132

Sword at the Belly of Red China. Duncan Norton-Taylor reviews phenomenal economic and military development of Taiwan, Chiang Kai-shek now ready for invasion of mainland to trigger disintegration of Red regime, but needs U.S. approval. Notes strength of high-calibre Army, Navy, Air Force, ACNAD three-mission strategy plan; industrialization strides with foreign money, JCRR land redistribution, agriculture program, capital shortage, deficit and budget problems. p. July 150-153, 280-284

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See also AUTOMOBILES; AUTOMOBILES — EUROPE Aug 98; BARREIROS DIESEL, S.A.

President Lynn Townsend announces company increases holdings in Simca Automobiles, S.A., strengthening base to compete in European market with Ford and General Motors. p. BM Mar 52

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CITIES AND TOWNS

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On the Road from Idlewild. Editorial speculates on reflections of returning vacationer to industrialized and rapidly-changing U.S. civilization, pressures of urban and suburban blight, lack of foresighted community planning. Oct 97-100

88,000 Golden Acres Waiting for the Dust to Settle. Seymour Freedgood reports on family-held Irvine Co., controlling 138-square-mile Irvine Ranch which blocks growth of metropolitan Los Angeles, board of directors struggle over proposed urban development plan. Nov 142-147, 252-267

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Burle S. Watson chief executive of one of U.S. companies exceeding $1 billion sales in 1962. p. BM Apr 58

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Two Concepts of Law. Editorial points out premise of rule of law underlies Athens conference of lawyers on World Peace Through Law and Washington debate on civil rights bill for federal government to prevent racial segregation in states; contrasted to denial of individual rights shown in pamphlet distributed by Brussels Reds. Aug 91-92

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CLARK EQUIPMENT CO.

Walter E. Schirmer appointed president and principal executive officer succeeding George Spatta who becomes chairman. p. BM Jun 58

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CLAY, LUCIUS

Chairman of Continental Can executive committee takes on partnership at Lehman Brothers. p. BM Mar 52

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Litton Industries uses polyvinyl chloride swimming-pool cover to seal off plant area for assembly of components of air-navigation systems. p. Pr Mar 168

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Safety cape of lightweight vinyl-coated cotton with glowing stripes for policemen, firemen, motorists developed by Sawyer-Tower Products. p. Pr Jan 155

$100 Million in "Rags". Seymour Freedgood reports Bobbie Brooks, Inc. and Jonathan Logan, Inc. at top of $4-billion women's outerwear industry; big publicly-held companies racing for $100-million sales goal as result of 1950's demand for moderately-priced casual and sportswear, "basic" style, and adoption of modern management practices. c.p. May 151-162

Industrial work suits of waterproof vinyl-coated nylon with microscopic pores to provide ventilation made by Industrial Products Co. and fabric by Reeves Brothers. p. Pr May 185

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Coal's Comeback at Moss No. 3. Portfolio of colored photographs with report shows how Clinchfield Coal Co. achieved U.S. bituminous production record. Huge sales volume, 5% profit return in 1962 at new mine in southwest Virginia with advanced mining and processing technology and new management concepts. Oct. 130-135

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Strippable coating of vinyl foam plastisol used to protect auto parts during shipment and storage, made by M. & T. Chemicals, Inc. p. Pr Jun 176

National Lead develops method to coat individual fibers of glass, cellulose, and other materials with polyethylene, causing fibers to retain outward shape and strength but assume the chemical and physical properties of the polymer layer. Encapsulated material called Nalcon then rolled into porous sheets. p. Pr Sep 179

Rust protection of inexpensive metal products economically feasible with a paper covering on which rust-inhibiting chemicals are spread in polka-dot pattern. Chemicals evaporate and form protective film. Paper made by Cromwell Paper Co. p. Pr Oct 192

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Soap Wars: A Strategic Analysis. Spencer Klaw's detailed account of three big soap companies' marketing strategies competing for heavy-duty laundry soaps and detergents market based on disclosures of previously-secret records at recent antitrust trial on Lever Bros. Colgate's Fab moderate success. Huge advertising outlays, chart. Jun 122-125, 182-198

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COLLEGES & UNIVERSITIES

That Wonderful Machine, The Brain. George A. W. Boehm reviews new approach in research on brain functions and behavior; wide variety of experiments by university teams including work at U.C.L.A.'s Brain Research Institute, diagrams, drawings. Feb 125-129, 184-192

Bringing Engineers Up to Date. George A. W. Boehm reviews new retraining courses to update engineers in basic new scientific concepts needed to understand and direct younger specialists. Inaugurated by U.C.L.A. with six-week cram course and adapted by G.E. for company staff. Other engineering schools explore similar programs. May 120-121, 179-180

Up from Gothic. Portfolio of colored photographs illustrate architectural variety, modern designs replacing traditional Gothic and Georgian in recent new college buildings; notes on architects, donors. May 142-147

College Architecture: The Economics and Aesthetics. Walter McQuade appraises generally poor architectural quality of new U.S. college structures because of shift in basic character of American colleges with cultural change, scientific trend and economic difficulties, limited sources of funds, pressure for rapid expansion. May 148-150

Communist influence at National University of Mexico noted in **New Communist Patterns in Latin America.** f.c.p. Oct 102

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Spending for Symmetry. Editorial disapproves proposal to establish Civilian Industrial Technology Program with government funds for civilian research and development to correct imbalance favoring military and space projects. May 104

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Winners and Losers in Sugar. Reviews 1963 chaotic sugar market with influx of speculators on New York Sugar Exchange and ensuing collapse of futures market. Speculation intensified by new law placing government quota from Cuba on world market and Agriculture Department's buying policy. Notes sugar companies' prospects for 1963, charts. p. PI Aug 209-218
Coping with the High Price of Sugar. Estimate of effects of price rise on big users of sugar. Most large buyers have superior "feel" for market and carry adequate inventories. Smaller companies hit by speculation. Company tonnages, table. PI Aug 215
Not-So-Free Silver. Trading in silver futures resumed after 29 years due to presumption U.S. Government out of market and true "free market" restored. But Treasury selling ceiling price still limits speculation. Bache & Co. are leading brokers, Irving Louis expert. PI Oct 232, 232

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Underdeveloped Government. Robert Lubar reports European Economic Community's growing power, nine-man bureaucratic Commission in Brussels with Walter Hallstein president. Discusses Action Program blueprint to extend economic planning, government regulations, antitrust, monetary moves. BG Jan. 51-58
Seventh Member. Michael Heilperin reports Greece first associate member of European Economic Community with 22 years to meet free-trade status due to poor economy. BG Jan 58, 63
After de Gaulle's Thunder. Projects possible effects of de Gaulle's rebuff of Britain's move to join Common Market on U.S. investments in Britain and Continent. French propose EEC limit direct foreign investment. Question of EEC taking more protectionist tack to be tested in U.S. negotiations to reduce tariff. Sentiment for free trade in Germany and Benelux countries noted. U.S. exports and investment trend, 1957-62 charts. BG Apr 65-70

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COMMUNISM
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Importance of Latin America's Elite. Julio E. Nunnez urges U.S. to rethink attitude on problem of underdeveloped nations, overstressing end of poverty as solution to communist encroachment. Notes basic issue is decline of Western leadership elite. Briefly reviews Castro's revolution in Cuba. Jan 70, 210
Two Concepts of Law. Editorial, reporting World Peace Through Law Conference in Athens, contrasts conference's underlying theme of rule of law to chauvinism and denial of individual rights shown in pamphlet distributed by Brussels Reds. Aug 91-92
New Communist Patterns in Latin America. Charles J. V. Murphy assesses changes in party tactics during past five years, political consequences of Fidel Castro; three distinct patterns in three countries with targets parties and personalities of the constitutionalist center and left. In Mexico strength wanes but remains base for action. In Brazil party infiltrates labor unions, Army student groups, leads peasant leagues in impoverished Northeast. Terrorism increases in Venezuela. c.p. Oct 102-107, 150-168

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I.B.M. On the Riviera. Portfolio of colored photos by Robert Mottar of I.B.M.'s new French laboratory at La Gaude to work on data transmission-communication systems and advanced abstract language for computer programing. c.p. Feb 92-93
Micromodular components, Monrobot XI, other computers are manufactured by Litton Industries. **When the Crowd Goes One Way Litton Goes the Other.** May 114-118, 220-228
Pocket-size recording device permitting workers to enter production information in I.B.M. 1030 system which transmits the data to a computer for analysis, enables management to get up-to-the-minute knowledge of production cycle. p. Pr Aug 178
Transistorized M.D. Lawrence Lessing reviews promising developments in new field of medical electronics including computer analysis of data to improve accuracy of diagnosis. Sep 130-134, 204-208
Commap automated map-making system developed by Pure Oil Co. to draw maps for oil exploration from raw data. A new method of computer programing facilitates greater input, better interpretation of data on gravity, magnetic fields, geology and seismology. Pr Nov 196
It's a Spryer Singer. Edmund K. Faltermayer reviews President Donald P. Kircher's rehabilitation of company since 1958 including aquisition of Haller, Raymond & Brown to produce electronic equipment and computers. Dec 144-148, 154-168
Computer-controlled welding fixture is used to weld aluminum panels into Saturn S-IVB fuel-tank sections at Douglas Aircraft Co.; fixture made by Pandjiris Weldment Co. and Union Carbide. p. Pr Dec 188

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CONGO
Ugly Face in Africa. John Davenport reviews U.N. actions in Congo since August 1960; questions whether U.N.'s military role in stemming Katanga independence movement was consistent with principles of U.N. charter; criticizes U.S. for failure to exert positive influence for rule of law. Feb 84, 214-217
Ralph Bunche, other readers defend U.N. policy in the Congo in letters to editor on FORTUNE article probing U.N. intervention. Apr 20

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CONSERVATION
Businessmen Who Love the Land. Portfolio of colored photographs with notes on businessmen who are leaders in promoting public conservation, and related legislation. Influence in government agencies and private citizens' groups including National Parks Service, Outdoor Recreation Resources Review Commission noted. Mar 114-121

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Here Come the Conservatives. Richard J. Whalen appraises the conservative revival, new aggressive power in U.S. politics within the Republican Party proclaiming the rights of the individual against expanding power of federal government. Discusses intellectual stimulus and historical background, emergence of Senator Goldwater. Group of leaders, drawing. Dec 106-109, 238-243

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Consumer's Pocketbook. Outlook for continued consumer buying rise through 1963, based on findings of FORTUNE semi-annual retailers survey. Demand in various lines of goods with trend to higher quality and greater luxury. Relation to income, saving, credit; 1957-64 chart. BR Mar 40, 44
Consumer Stance. Consumer spending continues to advance at $5-billion quarterly rate in past two years, exceeding $370-billion rate projected by FORTUNE in 1959;1957-63 chart. BR Jun 44, 46
Consumer Spending. FORTUNE semiannual survey of retailers projects optimistic sales increases with spending rate at $380 billion, with estimates in various lines of goods; 1957-63 chart. BR Oct 40-44

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Heavily insulated shipping containers for frozen food eliminating mechanical refrigeration, developed by Hertz Corp. and Avco Corp., tested by Howard Johnson. p. Pr Jan 148
Beverage container of lightweight polyethylene sheet which can be made on boxboard equipment developed by Koppers Co. p. Pr Jun 176
Tilt-Tainer for bulk cargo, which can be loaded at the plant, transported horizontally by truck, train, or ship, and then tilted to a standing storage position by hydraulic lift, made by Ship Container Corp. p. Pr Nov 192

CONTINENTAL AIRLINES
Bob Six's Bag of Tricks. Irwin Ross reports how Robert F. Six with free-wheeling and sales personality built small western trunk line from scratch. Discusses efficient management, cost savings, continuous-maintenance plan resulting in profits record, favorable financing terms for jet fleet, and Pioneer Air Lines merger. Cut-free experiment approved by CAB. p. Feb 130-132, 194-198

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$7-Billion Contract That Changes the Rules.
Part I. Richard A. Smith describes how Defense Dept. let contract for TFX joint Navy-Air Force jet fighter-bomber, setting new pattern for coordinated weapons procurement. Secretary McNamara's cost concept and $1 billion savings noted. Advance design planning and strategies of bidders discussed. Source Selection Board's award to Boeing upset by higher brass. Mar 96-101, 182-188
Part II. Smith probes prolonged playoff between Boeing and General Dynamics-Grumman evaluation teams. McNamara issues new rules for open competition on previously secret weightings, structural design, costs. Political pressures noted. Civilian secretariat makes final award to General Dynamics-Grumman, overruling Air Council and Source Selection Board. Apr 110-111, 191-200
In Defense of the Defense Secretary. Editorial supports Defense Secretary McNamara's decision on award of TFX bi-service fighter plane contract, new system of defense procurement for weapons with close surveillance of every stage of a contract's fulfillment replacing cost-plus policy. Apr 81-84

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Cash and Dividends. Peak annual rate of dividend payouts totaling $16 billion due not only to decisive upturn in economy but also longer-term shift in composition of assets of big cash-rich corporations with over 25 percent in cash and marketable securities after two decades of prosperity, charts. PI Jun 206, 208
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EISENHOWER, DWIGHT D. See CONSERVATISM; TAXATION Jan 74

ELECTRICAL EQUIPMENT

World's biggest cross-flow water-cooling tower first of two units being built at Southern California Edison Co.'s steam-electric generating plant by Foster Wheeler Corp. DC power supply unit that delivers 10Ma at 420 kv designed for research work by Research-Cottrell, Inc. p. Pr May 185, 196

New fuel cells developed at General Electric Research Laboratory convert wide range of hydrocarbons directly into electricity at moderate temperatures using a platinum-based electrode and liquid phosphoric acid electrolyte. p. Pr Jul 215

Automated printed-circuit-making machine using deplating process made by Marosi Precision Products Co. p. Pr Aug 178

Monopoly Is Embarrassing. Joseph Lucas (Industries) Ltd., dominant British producer of automotive electrical gear and parts under antitrust investigation, faces strong competition at home and abroad. Diversification and foreign expansion, especially European Continent push with slow returns squeezing profits discussed. BG Sep 80-87

In Electrical Manufacturing the World Is "Rationalize". Gilbert Burck appraises prospects of electrical equipment manufacturing industry in Britain, France, Germany, Italy, Sweden, Belgium, Holland, companies and products. Discusses boom expansion of 1950-62, growing intercontinental trade, intense exports competition, need for corporate efficiency, technical innovation, mergers. f.c.p. Sep 110-115, 160-170

Aluminum Ltd. develops new Y-shaped lightweight transmission tower to cut costs of installing transmission lines in rugged terrain. p. Pr Sep 179

ELECTRICAL WORKERS UNION, INTERNATIONAL See LABOR

ELECTRIC CIRCUITS See ELECTRICAL EQUIPMENT

ELECTRIC POWER

See also CAPITAL INVESTMENTS Mar 39; NUCLEAR POWER; PLASMA (IONIZED)

Eighteen eastern power companies form single producing and transmitting unit, move to get share in projected fourfold increase in demand during next 20 years. $350 million capital investment in new transmission lines and plants financed by Philadelphia Electric, Pennsylvania Power & Light, General Public Utilities, and Allegheny Power System. BM Jan 44

There's No Stopping REA—Or Is There? Hubert Kay reviews REA-financed rural electric co-ops' rapid growth in competition with electric-power companies, invading non-farm territories and threatening federally-subsidized, tax-free nationalized system (map). Tie-in with federal multi-purpose hydro dams, Upper Missouri Basin joint Bureau of Reclamation development plan, and proposal for independence from government discussed. 5 millionth customer, p. Feb 118-121, 170-184

To string cable across the Naruto Strait of Japan Sumitomo Electric Industries Ltd. lofts messenger wire with balloons attached at intervals. p. Pr Feb 159

Milan's reaction to Italy's nationalization plan. **Old Europe's Young Again—and Fretting.** Feb 218

Electric utilities plan 1963 capital spending increase. *Electrical World* survey. BR Mar 39-40

ELECTROCARDIOGRAPH See MEDICINE Sep 133

ELECTRODES

World's largest induction vacuum furnace at Allvac Metals Co. to pour and cool electrodes up to 20 feet long. p. Pr Mar 159

ELECTROMAGNETIC PUMP See PUMPS

ELECTROMAGNETIC SPECTRUM See LASERS

ELECTRON-BEAM PROJECTOR See PLASMA (IONIZED) Aug 130

ELECTRON DIFFRACTION CAMERA See PHOTOGRAPHIC EQUIPMENT

ELECTRON GUN, METAL See CUTTING MACHINES

ELECTRONIC CIRCUITS

Heat photography using special infrared camera to reveal possible weak links discussed in article **"Reliability" Engineering.** c. p. Apr 125

ELECTRONICS

See also LASERS; LITTRON INDUSTRIES; LUCAS, JOSEPH (INDUSTRIES) LTD.; MEDICINE; QUALITY CONTROL; THOMPSON RAMO WOOLDRIDGE INC.; UNITED AIRCRAFT CORP.

Litton Industries uses polyvinyl chloride swimming-pool cover to seal off plant area for assembly of components of air-navigation systems. p. Pr Mar 168

"Reliability" Engineering. George A. W. Boehm reports on new approach in quality control, basic concepts employing reliability number derived from testing and statistical mathematical probability; growing applications in defense contracts, industry, diagram. c.p. Apr 124-127, 181-186

Physicist Maurice Ponte is president of Compagnie Generale du Telegraphie Sans Fil, France's largest electronics manufacturer's thriving group of enterprises which stands to prosper if SECAM memory sequential system wins current Western Europe debate on choice of color television system. Company's growth and foreign expansion noted. BG Sep 76

Plastic-and-air package for delicate electronic instruments to prevent danger of breakage or shock in shipping made by Tuffy Products Co. under licensing agreement with Lockheed, California. p. Pr Nov 194

ELECTRONS See PLASMA (IONIZED)

ELLIS, CLYDE See RURAL ELECTRICATION ADMINISTRATION Feb 170

ELMAN, PHILIP See FEDERAL TRADE COMMISSION Aug 152

ELSOM, KENDALL A. See SCOTT PAPER CO.

EMERALDS See GEMS PI Jul 264

EMPIRE STATE DEVELOPMENT ASSOCIATION See NUCLEAR POWER Jul 173

EMPLOYMENT See LABOR

ENDICOTT JOHNSON CORP.

Eli G. White promoted president succeeding Pasquale J. Casella. Buys Kirby Shoe chain to expand in Far West. p. BM Sep 60

ENERGY See NUCLEAR POWER; PLASMA (IONIZED)

ENGINEERING

See also MEDICINE; QUALITY CONTROL

Bringing Engineers Up to Date. George A. W. Boehm reviews new retraining courses to update engineers in management in basic new scientific concepts needed to understand and direct younger specialists, inaugurated by U.C.L.A. with six-week cram course and adapted by G.E. for company staff. Other engineering schools explore similar programs. May 120-121, 179-180

ENGINES See AIRCRAFT INDUSTRY; AUTOMOBILES; GAS TURBINES

ENGLISH, J. MORLEY See ENGINEERING May 121

ENGLISH ELECTRIC CO. LTD. See ELECTRICAL EQUIPMENT Sep 112

E.N.I. See CHEMICALS Nov 223

EPPERT, RAY See NEGROES Sep 98

EPSCO INC. See MEDICINE Sep 134

ERHARD, LUDWIG See EUROPE Feb 222

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ESTES, ELLIOTT M. See GENERAL MOTORS CORP. Jun 102

ETHICS

Interest in Transitron. Editorial points up inadequate and fuzzy statutes governing personal investments of government personnel as disclosed in Senate hearings on SEC Chairman William L. Cary's personal stock holdings in Transitron Corp. Mar 80

B. F. Goodrich wins court decision enjoining former executive Donald Wohlegemuth from divulging trade secrets to new employer International Latex. BM Apr 52

Universal Match Corp. wins landmark court decree in suit charging that Vendo Co. had conspired with former U.M.C. employees to steal and use trade secrets. BM Dec 72

Congress and the Country Slicker. Editorial on rise and fall of Robert G. Baker from Senate page boy to Secretary of the Senate Democratic majority to operator of assortment of small businesses, influence peddler, and millionaire spotlights confusion of ethics in Congress. Dec 101-102

Tranquility of Mind. Editorial notes Congress inaction on study of bipartisan Senate committee on failure of either House to improve ethical standards; recalls early colonial Presidents' adamant refusal of gifts of money value while in public office. Dec 102

EUROPE

Underdeveloped Government. Robert Lubar reports on European Economic Community's growing power, nine-man supranational authority in Brussels, President Walter Hallstein as top Eurocrat, staff, Action Program to extend economic planning. BG Jan 51-58

Seventh Member. Michael Heilperin reports Greece is first new member of European Economic Community with special status of associate and 22 years to meet free-trade status due to poor economy. BG Jan 58, 63

Old Europe's Young Again—and Fretting. Robert Lubar reports recent trip and talks with business and government leaders on Europe's widespread prosperity and industrial vigor, evolution of U.S.-type economic environment with coming of Common Market. Discusses France's strong pace with government plan setting goal guidelines, slowdown in Germany's expansion, Milan's industrial growth contrasted to Rome. Notes Britain debates joining Common Market. Feb 86-91, 218-222

After de Gaulle's Thunder. Projects possible effects of De Gaulle's rebuff of Britain's move to join Common Market on U.S. investments in Britain and on Continent. Notes French proposal that EEC limit direct foreign investment. 1957-62 trend in U.S. exports and investment with EEC, charts. BG Apr 65-70

No Dumping Allowed. U.S. steel companies lodge dumping complaints against European producers of cold and hot rolled steel, wire rod, standard steel pipe, wire mesh to curb low-priced imports. Adverse reaction including importers' reprisals noted. Changes in export sales, leading product categories 1959-62, table. BG May 87-94

It's an International "Farm Mess" Now. Michael A. Heilperin and Robert Lubar probe protectionist agricultural policies of Western Europe Common Market countries; country-by-country differences provoking series of disputes in international negotiations, hinder drafting of EEC common farm policy and freer world trade. Complex EEC 1962 agreement calls for target prices, varible levy. May adversely affect U.S. exports, and tariff bargaining next year. Notes basic farm problems. Chart. c.p. May 134-137, 210-216

Men Behind the Wheels. Portfolio of photographs and notes on Europe's top automobile executives cite characteristic differences from Detroit executives, unique management problems, attitudes of thrift with ascetic offices and secretiveness due to experiences in lean years. Export-mindedness an edge in coming battle for world market. Aug 98-100

Monopoly Is Embarrassing. Reports Joseph Lucas (Industries) Ltd. dominant British producer of automotive electrical gear and replacement parts, now under antitrust investigation, but faces strong competition domestic and abroad. Discusses versification and foreign expansion, mergers. 1962 sales peak, squeeze on profits due to poor showing of foreign ventures. BG Sep 80-87

Global Stake of U.S. Business. Analyzes huge increase in U.S. direct overseas investment since 1950, Kennedy Administration's apprehension over potentially unfavorable effects, expansion in Common Market cutting into exports, and eroding of balance of payments situation. Foreign concern over economic domination noted. Distribution country by country, charts, maps. Dec 129-131

Europe's Industries new FORTUNE series of firsthand reports on six major industries of Western Europe.

Part I. Onrushing Auto Makers. Richard A. Smith appraises rapid growth of automobile industry during past decade at critical stage of development in 1963, uncertain market prospects with shift to buyers' market, changes in demand, 1965-70 outlook. Discusses situation in England, France, Germany, Italy, Common Market, and performance of leading carmakers, c.p. Aug 96-101, 190-204

Part II. In Electrical Manufacturing the World Is "Rationalize". Gilbert Burck appraises prospects of electrical equipment manufacturing industry in Britain, France, Germany, Italy, Sweden, Belgium, Holland, companies and products, leading executives. Notes 1950-62 boom expansion, growing intercontinental trade and world markets, intense exports competition. Sees need for corporate efficiency, technical innovation, mergers. f.c.p. Sep 110-115, 160-170

Part III. Chemicals: The Reluctant Competitors. Gilbert Burck appraises fast-growing chemical industry, 1953-62 record sales increase with competition in intra-European market intensified by new oil and natural gas resources, dismantling of Common Market tariffs, and antitrust regulations, also U.S. companies' moves into Europe. Discusses performance of leading producers in Britain, Germany, Italy, France, drawings. Nov 148-153, 218-228

Part IV. Untranquilized Drug Makers. Walter Guzzardi Jr. reviews pharmaceutical industry's difficulties since end of peak profits in late 1950's due to squeeze of intense international competition, government lowering of prices under national health services, invasion of U.S. firms, and outpouring of research shortening profit-producing life of drugs. Notes position of companies in Britain, France, Germany, Italy, Switzerland, and favorable trend toward centralization under Common Market. c.p. Dec 124-128, 202-209

EUROPEAN COURT OF HUMAN RIGHTS See LAW Aug 91

EUROPEAN ECONOMIC COMMUNITY See COMMON MARKET; EUROPE

EVEREST, FRANK F. See AIRCRAFT INDUSTRY Mar 97

EXCAVATING MACHINERY

Hydraulically-powered excavator and materials handler, with 30 interchangeable attachments for telescoping and revolving boom of crawler tractor made by Marion Power Shovel Co. p. Pr May 191

Gentle Bulldozers of Peoria. Gilbert Cross assesses Caterpillar Tractor Co.'s record as manufacturer of earthmoving machinery, construction equipment, crawler and wheel tractors, front-end loaders, 1962 profits, sales gain 711 percent over 1941. Old-fashioned operating principles emphasize quality and reliability of product. Foreign operations, expansion, research to diversify for future discussed. Jul 166-171, 201-202

Moving 11 Million Cubic Yards. Painting by Daniel Schwartz an impression of Caterpillar Tractor Co. equipment being used on Camanche Dam construction in California, with notes on project, contractors, big earthmoving machinery order. Jul 168-169

Heavy-duty hydraulically-powered boring and reaming attachment for trencher made by Davis Mfg. Inc. Hydraulic excavator and front-end loader cutting forward and backward movement to a minimum, and pivoting to dump load made by Koehring Co. p. Pr Aug 176

EXCISE TAX See TAXATION

EXECUTIVE AIRPLANES See AIRCRAFT INDUSTRY

EXECUTIVES, CORPORATE See BUSINESSMEN; MANAGEMENT

EXPENSE ACCOUNTS See CORPORATIONS

EXPLOSIVE-BONDING PROCESS See METALS

EXPORT-IMPORT BANK See CREDIT

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FAA See AIRCRAFT INDUSTRY Dec 212

FACTORIES See PLANTS, INDUSTRIAL

F.A.L.N. See VENEZUELA

FALTERMAYER, EDMUND K. (AUTHOR)

It's a Spryer Singer. Reviews President Donald P. Kircher's vigorous rehabilitation of ossified company, diversification program, company acquisitions, decentralized management move, foreign expansion. Dec 144-148, 154-168

FAMILIES See BUILDING; IRVINE CO.; LOEB, CARL M., RHOADES & CO.

FANSTEEL METALLURGICAL CORP.

Warren B. Hayes named new president. p. BM Apr 56

FARBENFABRIKEN BAYER See DRUGS Dec 125

FAR EAST See ASIA

FARM CREDIT ADMINISTRATION See RURAL ELECTRIFICATION ADMINISTRATION Feb 181

FARM MACHINERY See AGRICULTURE—EQUIPMENT

FARM PRICE-SUPPORTS See AGRICULTURE

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FAYNE, JAMES See KENNEDY, JOSEPH P. Jan 156

FCC See TELEVISION

FCIA See FOREIGN CREDIT INSURANCE ASSOCIATION

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FEDERAL AVIATION AGENCY See AIRCRAFT INDUSTRY Dec 212

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FEDERAL DEPOSIT INSURANCE CORP. See BANKS & BANKING

FEDERAL HOME LOAN BANK SYSTEM See BANKS & BANKING Jul 262

FEDERAL RESERVE BOARD See BANKS & BANKING; CREDIT; FOREIGN EXCHANGE

FEDERAL TRADE COMMISSION

See also ANTITRUST Feb 82; Dec 138; TAXATION

Root of the FTC's Confusion. Harold B. Meyers examines extra-broad discretionary power, inconsistent policy in recent cases on discriminatory, deceptive and monopolistic practices, including cooperative advertising in drugs and wearing-apparel. Notes Kennedy-appointed Chairman Paul R. Dixon crusading leader of three-man majority. Steps toward reform include new Bureau of Industry Guidance. p. Aug 114-116, 152-158

Strange Case of Sun Oil. M. R. Lefkoe reviews Sun Oil Co.'s six-year-old case involving discriminatory discount to franchised dealer to meet in-

dependent's price war; Supreme Court decision upholds FTC. Aug 117, 158, 163

FEDERATED DEPARTMENT STORES See STORES Dec 232

FEEDERS See AGRICULTURE—EQUIPMENT

FERGUSON, HUGH See NORTON CO. Aug 121

FERTILIZERS See AGRICULTURE—RUSSIA

FERTILIZER SPREADER See AGRICULTURE—EQUIPMENT

FIAT See AUTOMOBILES—EUROPE Aug 99, 192

FIBERS

National Lead develops method to coat individual fibers of glass, cellulose, and other materials with polyethylene, causing fibers to retain outward shape and strength but assume the chemical and physical properties of the polymer layer. Encapsulated material, called Nalcon, then rolled into porous sheets. p. Pr Sep 179

FIGHTER AIRPLANES See AIRCRAFT INDUSTRY

FILM, PHOTOGRAPHIC See PHOTOGRAPHIC EQUIPMENT

FINANCE COMPANIES See CREDIT

FINANCIERS See BUSINESSMEN

FINCH, ROBERT See WHIRLPOOL CORP.

FINLAND

Åke Kihlman chief executive of Oy Tampella AB, one of Finland's leading industrial complexes, urges Finland to reduce trade barriers. Record in reshaping Tampella as international organization in wood products, machinery, textiles, emphasizing exports in open competition noted; hydroelectric power stations for government, first birchwood corrugated cardboard mill. Russian deal. p. BG Aug 80

FINSIDER See STEEL—ITALY

FIREMEN, RAILROAD See LABOR

FIRESTONE, RAYMOND See FIRESTONE TIRE & RUBBER CO.

FIRESTONE TIRE & RUBBER CO.

Raymond Firestone, fourth of the late Harvey Firestone's sons, named chief executive succeeding elder brother Harvey Jr. retiring. p. BM Jul 102

FIRST NATIONAL BANK (BOSTON) See BANKS & BANKING

FIRST NATIONAL BANK (SAN JOSÉ, CALIF.) See BANKS & BANKING

FIRST NATIONAL CITY BANK (NEW YORK) See BANKS & BANKING

FISH & FISHING

H. J. Heinz Co. and Ralston Purina Co. move to get into fast-growing tuna business through mergers with Star-Kist Foods, Inc. and Van Camp Sea Foods Co. respectively. BM Apr 52

Inexhaustible Riches from the Sea. George A. W. Boehm reports surge of scientific interest in oceanographic research, source of new wealth in cheap food. Discusses "aquaculture," new technique of managing marine resources, breeding and pasturing fish, planned fisheries to control depletion. New Kennedy Administration ten-year government coordinated program. Dec 132-137, 218-229

Far Cry from Izaak Walton. Overleaf colored drawing depicts new wide variety of automated gear for herding and catching fish, opening the way to the exploitation of new resources. Dec. 134-35

FISHER, FRED See GENERAL MOTORS CORP. Nov 168

FLATCARS See RAILROADS—EQUIPMENT

FLINTKOTE CO.

President George J. Pecaro named chief executive. Chairman I. J. Harvey Jr. is retiring from active management. p. BM May 80

FLOAT-ZONE PROCESS See SILICON

FLORENCE, ITALY See ITALY

FLUES See STEEL

FMC CORP.

Chairman Paul L. Davies to fight antitrust suit to prevent purchase of American Viscose's operating assets. p. BM Jul 106

FOAM See COATINGS; URETHANE

FOLGER, J. A., CO. See ANTITRUST Aug 116

FOOD

See also AGRICULTURE; OCEANOGRAPHY

Heavily insulated shipping containers for frozen food eliminating mechanical refrigeration developed by Hertz Corp. and Avco Corp., and now being tested by Howard Johnson. p. Pr Jan 148

FOOD AND DRUG ADMINISTRATION See DRUGS

FOOD STORES See STORES

FORD, HENRY See AUTOMOBILES

FORD MOTOR CO.

See also GENERAL MOTORS CORP.

New President Arjay Miller is financial man and one of famous "whiz kids." p. BM May 80

FORD MOTOR CO. LTD. See AUTOMOBILES—EUROPE Aug 100, 190

FORD MOTOR CREDIT CO. See CREDIT Feb 124

FORECASTS See also BUSINESS ROUNDUP; STOCK MARKET

FOREIGN AID See UNITED STATES—FOREIGN RELATIONS

FOREIGN CREDIT INSURANCE ASSOCIATION

Insurance for Exporters. U.S. credit insurance scheme insuring export credits directly to cover short-term political and commercial risks set up by Export-Import Bank in 1961 and broadened in 1962 and 1963; supplements bank guaranty plan, table. BG Jun 69-76

FOREIGN EXCHANGE

See also BRAZIL; CANADA; LEBANON

Speculating in Exchange. Advice to individual investors on how foreign-exchange forward market operates; hedge against currency fluctuations, revaluation, outright speculation for profit, future contracts, negotiations with banks or brokers. Spot and forward rates in three major currencies, English pound sterling, German mark, Canadian dollar, 1960-63 chart. Notes three professional dealers and their views. PI Feb 201-204

Balance-of-Payments Bind. Gilbert Burck assesses chronic U.S. international deficit now totaling $26 billion, drain on gold endangering dollar and world leadership due to huge outflow of private capital, military and foreign-aid spending, with domestic fiscal and credit policies keeping interest rates low. 1946-62 charts. Suggests prudent monetary policy, competitive export prices as relief measures. Jun 112-117

Trade, Property, and the Dollar. Editorial urges U.S. to broaden international market to free up capital movements, and to help cure monetary disorders. Notes distrust of U.S. dollar, and balance-of-payments deficit with competitive prices and costs, budget control. Jul 129-130

Japan: The Open Door with a Catch. Louis Banks analyzes Japan's moves to liberalize foreign-trade regulations, exchange rules. Notes three-sided debate on extent of free market. Jul 134-141, 266-278

Sturdy Exports. Favorable turn in U.S. export surplus rate with new Administration policy raising short-term capital interest rate and proposed tax on foreign bonds and stocks cutting capital outflow and narrowing U.S. balance-of-payments. Prospects for further gains around the globe. 1956-63 chart. BR Aug 36, 38

Long Step Backward. Short editorial notes President Kennedy's proposal for tax on foreign securities as measure to meet balance-of-payments deficit constitutes barrier to outward flow of U.S. investment and leads to direct and specific exchange control undercutting U.S. goal of world free trade. Aug 92

Schweitzer Approach. Michael A. Heilperin, FORTUNE's European correspondent, reports Pierre-Paul Schweitzer, new Managing Director of International Monetary Fund, faces problem of dollar surpluses due to U.S. balance-of-payments deficit. BG Sep 75-80

Dream Businessmen Are Losing. Editorial points out progress toward multilateral international commerce and investment is jeopardized by U.S. expedient measures now under discussion to meet adverse balance of payments. Suggests more constructive approach is to allow interest rates to rise to natural levels and adopt prudent budget to bolster dollar, and to re-examine foreign-aid outlays. Sep 91-92

Tax Device to Stem the Outflow of Gold. Gaylord A. Freeman Jr.'s letter to Congressman Herman T. Schneebeli recommends reduction in corporate income tax as incentive to increase exports, alternative to devaluing dollar to meet decline in gold supply. Sep 94

U.S. Payments Policy. Michael A. Heilperin reports European central bankers' reaction to U.S. measures to meet balance-of-payments deficit. Federal Reserve Banks' raising discount rate welcomed, reservations about features of Kennedy program and implications of recent Brookings Institution report. BG Oct 81-82

Balancing Act. U.S. balance-of-payments position improves somewhat. Dutch and French raise discount rate to slow outflow of short-term funds. 1958-63 trend in net balance on trade, aid, private capital, chart. BR Dec 54, 56

Skeleton That Didn't Rattle. Michael A. Heilperin reflects on recent inconclusive annual meeting of International Monetary Fund in Washington, and its failure to touch on dollar problem. Notes special inquiry on liquidity prompted by concern over possibility of U.S. ending balance-of-payments deficit. Endorses European bankers' warning against excessive liquidity. Also notes experts disapprove present gold standard. Dec 104

FOREIGN INVESTMENTS See INVESTMENTS, FOREIGN

FOREIGN TRADE See under countries; COMMON MARKET

FORESTS & FORESTRY See CONSERVATION

FORGING See MISSILES & ROCKETS

FORMOSA See CHINA, NATIONALIST

FORSTMANN WOOLEN CO. See STEVENS, J. P., & CO.

FORWARD EXCHANGE See FOREIGN EXCHANGE

FOUNDATIONS, CHARITABLE AND EDUCATIONAL See IRVINE CO.

"FRAM 63" See DRILLING & BORING MACHINERY

FRANCE

See also EUROPE; GABON; INVESTMENTS, FOREIGN Dec 129

I.B.M. on the Riviera. Portfolio of colored photographs by Robert M. Mottar shows I.B.M.'s new laboratory at La Gaude for work on data transmission-communication systems, replacing outgrown Paris quarters. France plans to open scientific branch of university system in Nice. Feb 92-93

After de Gaulle's Thunder. Projects possible effects of De Gaulle's rebuff of Britain's move to join Common Market on U.S. investments in Britain and Continent. Notes French proposal that EEC limit direct foreign investment. BG Apr 65-70

Schweitzer Approach. Michael A. Heilperin reports Pierre-Paul Schweitzer, new Managing Director of International Monetary Fund, member of elite financial group in French career civil-service corps. His promotions in Ministry of Finance reviewed. BG Sep 75-80

Briefly reports physicist Maurice Ponte president of Compagnie Générale du Télégraphie Sans Fil France's largest electronics manufacturer thriving group of enterprises which stands to prosper is SECAM wins current Western Europe debate on choice of color television system. BG Sep 76

FRANCO, FRANCISCO See SPAIN

FRANKLIN DIVISION See STUDEBAKER CORP.

FRASER, KENNETH W. See STEVENS, J.P., & CO., INC. Apr 104

FRAUD See ETHICS

FRAWLEY, PATRICK, JR. See GILLETTE Co. Jul 238

FRB See BANKS & BANKING; CREDIT; FOREIGN EXCHANGE

FRB INDEX See PRODUCTION

FREEDGOOD, SEYMOUR (AUTHOR)

$100 Million in "Rags". Reports Bobbie Brooks, Inc. and Jonathan Logan, Inc. at top of $4-billion women's outerwear industry. May 151-162

Hotels: Time to Stop and Rest. Appraises hotel-motel building boom, 1962 peak over $1 billion by big chains for convention and luxury city hotels, motor hotels, grand motels; signs hotel surge is ending while pace of motels continues vigorous. Jul 162-165, 202-213

88,000 Golden Acres Waiting for the Dust to Settle. Reports family-held Irvine Co., which controls 138-square-mile Irvine Ranch blocking growth of metropolitan Los Angeles, locked in board of directors' struggle over proposed urban development plan. Nov 142-147, 252-267

FREEDOM NATIONAL BANK (NEW YORK) See BANKS & BANKING

FREEDOM OF SPEECH See LABOR

FREE ENTERPRISE

See also ANTITRUST; MANAGEMENT; SPAIN

Alpine View of Economics. Editorial reviews *Economics of the Free Society* by German-born economist Wilhelm Roepke, a new economics text emphasizing free-economy and moral values; contrasted to popular student text of M.I.T.'s Paul Samuelson blurring role of individual. Apr 84

Mr. Berle's Nostalgia. John Davenport reviews Adolph Berle's *American Economic Republic*, a new rationale and guide on modern U.S. economy; criticizes theory free competitive market system broke down in 1930's and was replaced by state planning. Jun 94, 236

FREEMAN, GAYLORD A., JR. (AUTHOR)

Tax Device to Stem the Outflow of Gold. Letter to Congressman Herman T. Schneebeli recommends reduction in corporate income tax as incentive to increase exports, alternative to devaluing dollar to meet decline in gold supply. Sep 94

FREIGHT See CONTAINERS; RAILROADS; SHIPPING

FREIGHT CARS See RAILROADS—EQUIPMENT

FREIGHTERS See SHIPPING

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FRIDEN INC. See SINGER CO.

FRONDIZI, ARTURO See ARGENTINA

FRUIT HARVESTERS See AGRICULTURE—EQUIPMENT

FTC See FEDERAL TRADE COMMISSION

FUEL See COAL; MISSILES & ROCKETS; NUCLEAR POWER

FUEL CELLS See ELECTRICAL EQUIPMENT

FUEL INJECTORS See LUCAS, JOSEPH, (INDUSTRIES) LTD.

FUEL PUMPS

Tiny fuel pump made almost entirely of plastic for use in small gasoline engines made by ACF Industries. p. Pr Nov 196

FUJI BANK See BANKS & BANKING—Japan Jul 136

FUMIGANTS See AGRICULTURE—EQUIPMENT

FURNACES

World's largest induction vacum furnace at Allvac Metals Co. to pour and cool electrodes up to twenty feet long. Diffusion furnace at Raytheon's new plant processes germanium for transistors, using super-pure hydrogen from which contaminating water is frozen out by using liquid nitrogen. p. Pr Mar 159, 168

New cokeless iron-smelting plant using Strategic-Udy process, big electric furnace to produce high-grade pig iron using inferior coal at government-owned Corporation Venezolana de Guayana in Venezuela. p. Pr Sep 174

To speed up stress relieving of storage tanks Master Tank & Welding converts a flatcar to roll directly into the heat chamber and car becomes floor of high-temperature furnace. p. Pr Nov 192

FURTADO, CELSO See BRAZIL; LATIN AMERICA Oct 156

FUSION POWER See NUCLEAR POWER; PLASMA (IONIZED)

G

GABON

Jungle Mesabi. Mékambo iron-ore deposit consisting of three mountains in remote area is major find according to Paul Deutchman's report of recent tour. French Government promoted Somifer consortium to develop mine organized by Bethlehem Steel, and managed by Peter Telfair. New Gabon Government grants mining concession. Notes work under way, financing question, map. BG Dec 81-84

GAMBLE, BERTIN See ALLEGHANY CORP.

GAMBLE-SKOGMO INC. See ALLEGHANY CORP.

GAMER, BERTHOLD See ELECTRICAL EQUIPMENT Sep 114

GANTRY CRANES See CRANES & DERRICKS

GARMENT INDUSTRY See CLOTHING

GARRETT CORP.

Edward Bellande vice president for international operations becomes chairman and chief executive officer. p. BM Aug 70

President Harry Wetzel negotiates Signal Oil & Gas Co. merger. Stock deal halts Curtiss-Wright raid for control. p. BM Dec 66

GAS, NATURAL See EUROPE; MEXICO

GAS TURBINES

Silencer-cooler attached to Lycoming gas-turbine engine reduces engine noise by changing the angle of the sound waves; also cools engine oil, made by Giannotti Associates. p. Pr Jun 171

GEAR CHECKER See TESTING

GEIGY, J. R. See DRUGS Dec 124

GEMS

Beautiful Investments. Growing requests to assemble gem "portfolios" by New York firms points up increasing American interest in jewels as investments. Similar interest seen in Europe. Diamonds, rubies, sapphires and emeralds qualify for investment. p. PI Jul 264

GENEEN, HAROLD S. See INTERNATIONAL TELEPHONE & TELEGRAPH CO.

GENERAL ANILINE & FILM CORP.

President Jesse Werner announces record sales and profits in 1962. BM Apr 52

General Aniline Goes Private. Irwin Ross assesses present condition and prospects pending final sale to private owners by U.S. Government chief owner since 1942 seizure as enemy property. Discusses drawbacks to growth over past 21 years with interplay of politics and patronage, Kennedy Administration changes, over-cautious management. Notes performance of various divisions, Ansco film, Ozalid office-copying equipment, Dyestuff & Chemical Division, big 1962 sales and profit gain under President Jesse Werner. Sep 127-129, 144-156

GENERAL CIGAR CO.

Edgar M. Cullman named president and chief executive officer. p. BM Feb 54

GENERAL DRIVERS, CHAUFFEURS & HELPERS UNION

See LABOR Nov 176

GENERAL DYNAMICS CORP. See AIRCRAFT INDUSTRY; NUCLEAR POWER Jul 174; PLASMA (IONIZED) Aug 133

GENERAL ELECTRIC CO.

See also AIRCRAFT INDUSTRY Mar 182; LABOR Nov 172; LASERS; NUCLEAR POWER Jul 172; PLASMA (IONIZED) Aug 133

Bringing Engineers Up to Date. George A. W. Boehm reviews new retraining courses to update engineers in basic new scientific concepts needed to understand and direct younger specialists, inaugurated by U.C.L.A. and adapted by G.E. for company staff. May 120-121, 179-180

Fred J. Borch to become new president succeeding Gerald L. Phillippe who in turn will be chairman when Ralph Cordiner's departure marks end of era of personal domination of decentralized operation. Huge sales and profits gain 1950-62 noted. p. BM Dec 65

GENERAL FOODS CORP.

Passing on the Ransom. Editorial notes statement to stockholders explaining nominal cost of big donation of food products to Cuban prisoners ransom fund, treated as tax deduction. Apr 84

GENERAL MOTORS CORP

See also AUTOMOBILES; AUTOMOBILES—EUROPE Aug 96; CAPITAL INVESTMENTS; CORPORATIONS Jun 206

Chairman Frederic Donner reports after-tax profits of $1.46 billion for 1962, also production record. BM Mar 52

How General Motors Did It. Robert Sheehan analyzes top position in 1962-63 passenger-car market boom with sales over $14 billion, increase in penetration, charts. Notes superior planning and timing small-car market, Chevrolet, Buick-Oldsmobile-Pontiac moves, Cadillac improvements, foreign expansion. Gives new light on successful market strategy and Sloan system of decentralization under Chairman Donner and President Gordon. f.c.p. Jun 96-111, 224-234

FORTUNE cover portrait painting of Alfred P. Sloan Jr. by Robert Weaver. Sep

My Years with General Motors Alfred P. Sloan Jr.'s business autobiography.

Part I. A Quarter Century of Glorious Creation—and a Downfall. Reviews Walter C. Durant's organization based on diversified line of cars for varied tastes and economic levels. Discusses integrated parts manufacture, mergers, management ineptitudes, bankers' refinancing and control involving Du Pont interests, 1910-15, further difficulties in 1920, J. P. Morgan loan; chart. Sep 135-142, 196-204

Part II. We Decide What We're Trying to Do—and Then Don't Do It. Discusses corporation's irresolute years, reorganization incorporating decentralization and coordinated control based on Sloan's Organization Study, policy to mass-produce full line of cars graded upward in quality and price to meet competition of Ford's Model T and to increase market penetration, Kettering's air-cooled engine fiasco. Oct 145-148, 194-213

Part III. Our Strategy Works Out to a "T"—and the Model T Goes Under. Reviews in detail how Sloan extended management decentralization and coordination program based on careful analyses of problems of automobile industry in 1920's, new interdivisional relations committees, capital investment controls, four basic criteria for evaluating expenditures, concept of mass-class market to displace Ford as biggest seller. Nov 167-170, 198-216

Part IV. We Struggle for a Delicate Balance of Management. Reviews company's reappraisals of management, further coordinated decentralization to meet contraction of business in depression of early 1930's, marketing strategy, how policy is developed, division structure; chart. Dec 149-152, 173-185

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GENERAL OUTDOOR REALTY CORP. See ALLEGHANY CORP.

GENERAL PUBLIC UTILITIES CORP. See ELECTRIC POWER

GENERAL TELEPHONE CO. See LASERS Jun 160

GENERAL TIRE & RUBBER CO. See LABOR Nov 172

GENESCO INC.
Maxey Jarman's offer to buy S. H. Kress & Co. stock above the market rejected by Kress Foundation. Jarman appeals to Kress stockholders directly. p. BM Sep 64
W. Maxey Jarman becomes chairman and chief executive of S. H. Kress & Co. as Genesco finally acquires control. p. BM Dec 70

GEOLOGICAL SURVEY (U.S.) See MAPS

GEOLOGY See OCEANOGRAPHY; ROCKS

GERARD, RALPH W. See MEDICINE Feb 191

GERDES, ROBERT H. See PACIFIC GAS & ELECTRIC CO.

GERMANY
See also EUROPE
Heinrich Jakoff, president of Klöckner Humboldt-Deutz, which he assembled as diversified manufacturing and engineering firm, has two projects under way: truck and bus plant for Egyptian Government and new modern headquarters for Klöckner. Comments on numerous problems disturbing all German managers. p. BG Jul 118
Moneymaking Train for Money-Makers. Portfolio of black-and-white photographs illustrates Rheingold Express showpiece of *Budesbahn*, West Germany's federal railroad system. Dec 141-143

GERSTENBERG, RICHARD C. See GENERAL MOTORS CORP. Jun 111

GILBERT, CARL See GILLETTE CO. Jul 158

GILBERT, EDWARD M. See LOEB, CARL M., RHOADES & CO.

GILLETTE CO.
Gillette Faces the Stainless-Steel Dragon. Walter Guzzardi Jr. appraises outlook with remarkable record in sales, profits, investment return, cash reserves based on maxim of making billions of razor blades cheap and selling them dear. Facing strong stainless-steel blade competition, Gillette will market own brand but risks curtailed sales and profits. Notes performance of Safety Razor Co., Toni Co., Paper Mate divisions, new products, toiletries, top executives. c.p. Jul 158-161, 238-250

GILLETTE SAFETY RAZOR CO. See GILLETTE CO.

GIMBEL BROTHERS See STORES Dec 232

GLASS See LASERS

GLASSER, GEORGES See ELECTRICAL EQUIPMENT Sep 115

GLASS FIBERS See RAILROADS—EQUIPMENT; STEVENS, J. P., & CO. INC.

GLICKMAN, LOUIS See GLICKMAN CORP.

GLICKMAN CORP.
Francis S. Levien, president Universal American Corp., also becomes chairman of Glickman. Levien is major creditor of Louis Glickman, founder and former chairman who filed bankruptcy petition. Name to be changed to Franchard Corp., p. BM May 76

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GOAD, LOUIS C. See GENERAL MOTORS CORP. Jun 100

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Tax Device to Stem the Outflow of Gold. Gaylord A. Freeman Jr.'s letter to Congressman Herman T. Schneebeli recommends reduction in corporate income tax as incentive to increase exports, alternative to devaluing dollar to meet decline in gold supply. Sep 94

GOLDEN GATE NATIONAL BANK See BANKS & BANKING Oct 245

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GOODRICH, B. F., TIRE CO.
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GOODYEAR TIRE & RUBBER CO.
Chairman Edwin J. Thomas announces pending acquisition of Motor Wheel Corp. through exchange of stock. BM Oct 60

GORDON, JOHN F. See GENERAL MOTORS CORP. Jun 100

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There's No Stopping REA—Or Is There? Hubert Kay reviews REA-financed rural electric co-ops' rapid growth in competition with electric-power companies, invading nonfarm territories and threatening federally-subsidized, tax-free nationalized system. Independence from government proposed. Feb 118-121, 170-184

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GRACE, W. R., & CO.
Unfinished Job at W. R. Grace. Carl Rieser reviews transformation of family trading and shipping empire under President Peter Grace since 1945, retreat from unstable Latin America, entry and rapid expansion in chemicals through mergers with Dewey & Almy, Davison, Overseas Chemical, Nitrogen Products, Hatco, Polymer divisions and other diverse moves. Notes big gain in revenues, 1962 earnings record. Considers selling Grace Line and Panagra half interest. c.p. Aug 108-113, 228-232

GRACE LINE See GRACE, W. R., & CO.

GRADING MACHINES, LUMBER See LUMBER & LUMBERING

GRAF, ROBERT See INDUSTRIAL DESIGN Aug 135

GRAFT See ETHICS

GRAIN ELEVATORS
Giant grain elevator in Montreal with three traveling towers that can be positioned opposite the hatches of a grain carrier and unloaded on a continuous belt built for Canada's National Harbours Board, p. Pr Aug 159

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GREATAMERICA CORP.
Chairman Troy V. Post buys big block of stock of First Western Bank & Trust Co., Los Angeles. p. BM Jan 46

GREAT ATLANTIC & PACIFIC TEA CO.
Pinching 500,000,000,000 Pennies. Reports conservative top-rank food chain's changes in selling strategy, management to offset decline in growth rate, market share due to competition. Under pressure of directors and Hartford heirs, John Ehrgott new president replaces Ralph Burger protégé of George and John Hartford who laid down simple precept to sell volume low-priced quality foodstuffs. Notes three new vice presidents. Sales compared, 1950-62 chart. c.p. Mar 104-109, 170-180
John D. Ehrgott succeeds Ralph Burger as chief executive. Burger remains chairman. p. BM Jun 58

GREAT BRITAIN
See also EUROPE
Along Throgmorton Street. London Stock Exchange steps up reforms and becomes more professional. New building plan opposed by minority group of small brokers, p. BG Apr 70, 74-76
Paul Chambers, board chairman of Imperial Chemical Industries, calls in McKinsey & Co., U.S. management consultants, to recoup profits decline and public image dented by clumsy negotiations in costly take-over battle for Courtaulds ending with minority equity. Pushes export sales, heavy spending on new plant and equipment abroad. p. BG May 88
Monopoly Is Embarrassing. Reports Joseph Lucas (Industries) Ltd. dominant British producer of automotive electrical gear and parts under antitrust investigation now facing strong domestic and foreign competition. Notes postwar diversification and foreign expansion, 1962 sales peak. BG Sep 80-87

GREECE
Seventh Member. Michael Heilperin reports Greece first associate member of European Economic Community with 22 years to meet free-trade status due to poor economy. Shipping, tourism, emigrant remittances are main sources of income. Industrialization needed. View of Epidaurus ancient theater, p. BG Jan 58, 63

GREENEBAUM, LEON C. See HERTZ CORP.

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GRINDING MACHINES
Rotary grinder to polish halves of steam-turbine generator casing to extreme accuracy made by Farrel-Birmingham Co., Inc. and Blanchard Machine Co. for General Electric Co. p. Pr Feb 162
It's No Longer Just Grind, Grind at Norton. Reports Norton Co. world's largest manufacturer of abrasives merged with National Research Corp. to diversify product development in metallurgy, high-vacuum and temperature technologies. Notes full line of grinding wheels, coated abrasives, machine tools, foreign business, 1962 earnings record, prudent management by Chairman Milton Higgins II, grandson of founder. Aug 118-123, 164-170
Versatile belt grinding machine with contact wheel and "square wheel" made by Square Wheel Co. Tool also has platen for flat grinding a yoke surface for contour grinding, p. Pr Aug 174
Adaptable grinder using novel technique of controlled force exerted against workpiece, which permits the wheel to slow down when it hits a hard spot, developed by Healed Machine Co. for bearings, bushings, valve lifters, etc. p. Pr Dec 190

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GULF OIL CORP. See OIL Feb 100

GULTON INDUSTRIES, INC. See MEDICINE

GUZZARDI, WALTER, JR. (AUTHOR)

How Rathbone Runs Jersey Standard. Closeup account of how president and chief executive of world's largest oil company presides over daily affairs. Jan 84-89, 171-179

Optimistic World of Edgar Kaiser. Reports Edgar Kaiser's vigorous management of Kaiser industrial complex, new stage of growth, foreign ventures. Apr 90-97, 214-219

Gillette faces the Stainless-Steel Dragon. Appraises outlook of Gillette Co. Jul 158-161, 238-250

Untranquilized Drug Makers. Reports on Western Europe's pharmaceutical industry difficulties since end of peak profits in late 1950. Dec 124-128, 202-209

GWINN, WILLIAM P. See UNITED AIRCRAFT CORP. Dec 114

GYROSCOPES

Experimental nuclear gyroscope for aircraft, missile, and space-vehicle guidance with no moving parts made by General Precision Inc., Gyro consists of cell filled with mercury isotopes spinning on their own axes. p. Pr Apr 164

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Squeeze on Shopping Centers. Explores special economics of shopping centers and the difficulties pressing developers. Sep 116-118, 238-239

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HAMILTON STANDARD DIVISION See UNITED AIRCRAFT CORP.

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HEILPERIN, MICHAEL A. (AUTHOR)

Seventh Member. Reports Greece first new member of European Economic Community with special status of associate. BG Jan 58, 63

It's an International "Farm Mess" Now. Collaborating with Robert Lubar, Heilperin probes protectionist agricultural policies of Western Europe Common Market countries, country-by-country differences provoking series of disputes hindering drafting of EEC common farm policy. May 134-137, 210-216

Schweitzer Approach. Reports French financial expert Pierre-Paul Schweitzer new Managing Director of International Monetary Fund to pursue conservative monetary policy with case study approach. BG Sep 75-80

U.S. Payments Policy. Reports European central bankers' reaction to U.S. measures to meet balance-of-payments deficit; notes reservations about some features of Kennedy program. BG Oct 81-82

Skeleton That Didn't Rattle. Reviews recent inconclusive annual meeting of International Monetary Fund in Washington. Dec 104

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HEINZ, H. J., CO.

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HELLER, ROBERT, ASSOCIATES

Robert Heller founder of management-consulting firm sells stock to associates who choose Lawrence T. Mayher as president. p. BM Dec 70

HELLER, WALTER E., & CO.

President Robert I. Livingston announces purchase of Vulcan-Hart Corp. Louisville kitchen-equipment manufacturer, first move outside of financial field. p. BM Jul 106

HELLIS, WILLIAM B. See IRVINE CO. Nov 252

HELM, HAROLD See BANKS & BANKING

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HERCULES POWDER CO.

Henry A. Thouron takes over as chief executive in company's growth stage due partly to government contracts in missiles and space. BM Mar 51

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HERTZ CORP.

IT'S Hertz Itself in the Driver's Seat. Stephen Mahoney reviews leading car and truck rental and leasing business with consistent profits showing despite keen competition. Discusses efficient operational and financial management of new executive team. Director Frank Manheim promotes expansion program. Hertz American Express foreign venture proves successful. Oct 118-123, 224-228

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HOTEL CORP. OF AMERICA See HOTELS Jul 163

HOTELS

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Hotels: Time to Stop and Rest. Seymour Freedgood appraises hotel-motel building boom with 1962 peak over $1 billion by big chains for convention and luxury city hotels, motor hotels, grand motels. Although there are signs the hotel surge is ending with drop in demand and revenues, the motel pace continues vigorous. Notes financing and investment appeal. Older hotels suffer high vacancy rate. Building trend 1945-64, chart. c.p. Jul 162-165, 202-213

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HUMBLE OIL & REFINING CO.
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HYDROFOILS
Soviet hydrofoil built for use on the Danube with auxiliary fins behind the main bow hydrofoils to dampen rolling and provide stability in rough water. p. Pr Feb 164

HYDROGEN
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New secret catalyst consisting of aspirin-sized pellets to produce hydrogen from natural gas invented by Girdler Catalysts unit of Chemetron Corp. to cut construction cost of hydrogen plants. p. Pr Apr 164
Forged-steel crankshaft for world's largest reciprocating compressor built by Clark Bros. Co., division of Dresser Industries, Inc., for Union Carbide's Linde Division to speed up liquid hydrogen production. p. Pr Aug 174

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IMMIGRATION
Wanted: New Men. Editorial endorses President Kennedy's proposal to liberalize restrictive U.S. immigration laws, especially current quotas based on 1920 population figures. Kennedy proposal calls for new criteria giving top priority to skills. Oct 100

IMPERIAL CHEMICAL INDUSTRIES LTD.
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Board Chairman Paul Chambers calls in McKinsey & Co., U.S. management consultants, to recoup profits decline and public image dented by clumsy negotiations in costly take-over battle for Courtaulds ending with minority equity. Gradually diverts from heavy chemicals into faster-growing plastics, pharmaceuticals, and synthetic fibers. Pushes export sales. p. BG May 88

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INCOME
See also AGRICULTURE; BUILDING; GREECE; STATISTICS Oct 144
Forecast for rise in disposable rate in next 18 months. BR Jan 32, Jul 46
Rise in disposable income in relation to consumer buying, 1957-64, chart. BR Mar 40, 41
Outlook for further rise in disposable income if income tax is cut. BR Jun 46
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What's Wrong with Planning: The Case of India. William Letwin analyzes fallacy that national economic planning fosters maximum growth, an especially popular theory in underdeveloped countries. Reviews India's experience with five-year plans emphasizing heavy industries financed by forced capital accumulation, inefficient steel mills. Advises labor-intensive light manufacturing to absorb unemployed and develop export market. c.p. Jun 118-121, 144-151
India Article Challenged. Group of men on M.I.T. faculty criticize William Letwin's article. FORTUNE replies. Aug 94

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INDONESIA, REPUBLIC OF
"A Complete Draw". Reviews agreement signed in Tokyo between three big western oil companies. President Kennedy's special envoy Wilson Wyatt mediated, broke deadlock on critical issues before Sukarno-imposed deadline. Other key figures in bargaining include Chaerul Saleh, Minister of Basic Industry. p. BG Aug 79-87

INDUSTRIAL DESIGN
Industrial Designer with a Conspicuous Conscience. Walter McQuade reviews Eliot Noyes' success as industrial designer, architect, corporate consultant, exponent of good taste and moral approach, "clean" machine design. Notes work as consultant for Westinghouse, I.B.M. c.p. Aug 135-138, 183-190
Steel Company in the World of Culture. Colored portfolio shows examples of distinguished design and fine arts program of Italsider, state-controlled steel company. Works range from design of memo pads to commissioning of best Italian artists to illustrate books as Christmas gifts for employees and special in-plant steel sculpture project. Oct 138-141

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INSURANCE
See also CORPORATIONS; MEDICINE
Greatamerica Corp. of Dallas, largest U.S. insurance holding company, buys big block of stock of First Western Bank & Trust Co., Los Angeles. BM Jan 46
Insurance for Exporters. Credit insurance program in partnership with casualty and surety companies to insure export credits directly to cover short-term political and commercial risks set up in late 1961 by Export-Import Bank and extended to medium-term in 1962; offers reduced-premium policies in 1963. BG Jun 69-76
Fortune Directory annual review of 50 largest U.S. life insurance companies, 1962 rank in assets, life insurance in force, table. Aug 145
Investing in Insurance. Reports new interest in life insurance as an investment with sales booming, big gain in first half of 1963. Notes rising demand for cash-value policies due to special tax advantages, slowdown in group insurance, slight gain in industrial. Case against high-cost term insurance (chart). Sees future trend uncertain with chance of new tax on group premiums. However, two favorable developments are new mortality tables, and electronic data-processing equipment lowering overhead. PI Sep 229-232

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INTEREST RATE See BANKS & BANKING; CREDIT; FOREIGN EXCHANGE

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I.B.M. on the Riviera. Portfolio of colored photographs by Robert M. Mottar and notes on I.B.M. World Trade Corp.'s new French laboratory at La Gaude to work on data-transmission communications system and advanced computer programing, replacing outgrown Paris quarters. Feb 92-93

INTERNATIONAL DEVELOPMENT ASSOCIATION See UNITED STATES—FOREIGN RELATIONS

INTERNATIONAL LATEX CORP.
B. F. Goodrich Tire Co. wins court decision enjoining former executive Donald Wohlegemuth from divulging trade secrets to new employer. p. BM Apr 52

INTERNATIONAL MANAGEMENT CONGRESS See MANAGEMENT

INTERNATIONAL MONETARY FUND
Schweitzer Approach. FORTUNE European Correspondent Michael A. Heilperin reports that new Managing Director, French Financial Expert Pierre-Paul Schweitzer, will pursue conservative monetary policy with case-study approach. Notes problem of dollar surpluses due to U.S. balance-of payments deficit. BG Sep 75-80
Skeleton That Didn't Rattle. Heilperin reviews recent inconclusive annual meeting in Washington, failure to touch on dollar problem. Notes "Special Borrowing Arrangement" inquiry on liquidity promoted by concern over possibility of U.S. ending balance-of-payments deficit. Weighted voting favors industrially-advanced nations. Dec 104

INTERNATIONAL PRODUCTS CORP.
Hickman Price Jr. becomes chief executive with purchase of stock interest. p. BM Mar 56

INTERNATIONAL TELEPHONE & TELEGRAPH CO.
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Harold S. Geneen chief executive of one of U.S. companies exceeding $1 billion sales in 1962. p. BM Apr 58

INTERPUBLIC INC.
Marion Harper Jr. negotiates purchase of David B. Williams Co., a management company owning Erwin Wasey, Ruthrauff & Ryan. Interpublic becomes world's biggest advertising organization. p. BM Dec 72

INTERSTATE COMMERCE COMMISSION See RAILROADS

INTRA BANK, S.A. See BANKS & BANKING—LEBANON

INVENTIONS
See also special types, e.g. AGRICULTURE—EQUIPMENT

Foot-powered vehicle invented by Parsian Fernando Ruiz Luciarte is ingenious solution to traffic problems. p. Pr Apr 169

Connecticut Valley, Where American Industry Began. Portfolio of drawings by Paul Hogarth shows cradle of industrial revolution, mass production, Yankee inventiveness. Dec 116-123

INVENTORIES
Forecast inventory-buying rise next in 18 months, 1957-64 chart. BR Jan 28, Jul 42

Swing to Inventories. FORTUNE quarterly survey of business plans indicate big rise over next six months, relation to sales of hard goods, soft goods, inventory-purchase ratio, executives' desired ratio, accumulation and liquidation, 1960-63 charts. BR Feb 40, 44

Inventory Buildup. Estimated $6 billion increase in inventory buying during next twelve months exceeds findings of FORTUNE quarterly survey of executives' plans to maintain stocks in line with sales rise. Big rise in steel stockpiling with record output. Notes car stocks tight, durable and non-durable goods situation, 1960-63 chart. BR May 44, 48

Inventories: Ready to Move. FORTUNE survey of executives' plans indicates broad uptrend in inventory buying with stocks at lowest level in recent years due to decline in accumulation rate and rising sales from first to second quarter 1963. Estimates on steel, cars, hard goods, nondurables, 1960-63 chart. Commerce Dept. revision of inventory estimates confirms validity of FORTUNE analytic system. BR Aug 32, 36

Inventories to the Fore. Latest FORTUNE quarterly survey of executives' plans indicates major upturn in inventory buying under way, and projects accumulation rate of $8 billion during next twelve months. Situation in steel, cars, other durable and nondurable goods lines, 1960-63 chart. BR Nov 48, 52

INVESTMENT BANKING
See also GENERAL MOTORS CORP.

Wherever you Look, There's Loeb, Rhoades. T. A. Wise reviews unique position of Carl M. Loeb, Rhoades & Co., Wall Street investment banking firm, growth since founding in 1931 through investment-fund management, underwriting, brokerage, and venture capital deals under astute senior partner John L. Loeb. Notes reorganization followed investment theory dispute in 1950s. Apr 128-131, 145-157

Of Men, Money, and Marriage. How success of Carl M. Loeb, Rhoades & Co. derives from men, money, and marriage. Founded by German immigrant Carl M. Loeb in 1931. Apr 131-132

INVESTMENT COMPANIES See INVESTMENT TRUSTS

INVESTMENTS
See also Capital Investments; Hotels; Investment Banking; Stock Market

Joseph P. Kennedy: A Portrait of the Founder. Richard J. Whalen gives detailed account of rise as capitalist, speculative investment deals in banking, moving pictures, real estate, liquor, oil. Jan 111-118, 156-168

Auto Stocks in High. Notes investment appeal of shares in automobile industry with weekly news reports giving readily available figures on car production which is a key indicator of the earnings trend; 1963 expectations for five U.S. auto companies, 1961-62 charts. PI Jan 181-184

Speculating in Exchange. How foreign-exchange forward market operates, as hedge against currency fluctuations, revaluation, outright speculation for profit, future contracts, margin requirements, negotiations with banks or brokers, 1960-63 chart. Three professional dealers. PI Feb 201-204

Cash-Flow Flat. Reviews accountants' objections to inaccurate use of cash-flow concept in annual reports and "market letters," analysts' one-sided practice of identifying as earnings and omitting commitments for future expenses. PI Feb 204, 206

Interest in Transitron. Editorial points to inadequate and fuzzy statutes governing personal investments of government personnel as disclosed in Senate hearing on SEC Chairman William L. Cary's personal holdings of Transitron Corp., glamor stock which suffered big price drop in 1961-62, and other investments. Mar 80

$6 billion advance in total investment in 1963, private, housing, capital goods, 1960-63 chart. BR Apr 39

Depletion: What's at Stake for Thirty Companies. FORTUNE'S estimate of oil-depletion allowances of largest U.S. oil companies, based on estimated production revenues, net sales percentages, table. PI Apr 206

Cleopatra's Prospects. Assesses Twentieth Century-Fox's potential profits of new motion picture *Cleopatra* starring Elizabeth Taylor; most costly and publicized film. PI May 234

Drift to Thrift. Resurgence of thrift during past two years with big increase in individual savings in thrift institutions, due to investors switching from stocks after 1962 stock market collapse and rising interest rates. PI Jul 261-264

Beautiful Investments. Growing demand for gem "portfolios" in New York firms points up increased American interest in jewels as investments. Similar interest noted in Europe. Unmounted stones are best investment bets. PI Jul 264

Winners and Losers in Sugar. Reviews 1963 chaotic sugar market, influx of speculators in futures on New York Sugar Exchange. Small user-manufacturers are new category of buyers due to imminent world shortage and price rise. Ensuing collapse of futures market. Sugar companies' prospects for 1963, charts. PI Aug 209-218

Investing in Insurance. Rediscovery of life insurance as an investment with sales booming, rising demand for cash-value policies due to special tax advantages, IRS enforced collection of tax on dividends, interest previously evaded. Case against high-cost term insurance, chart. Future trend uncertain. PI Sep 229-232

Who's to Blame for Riklis?—Riklis? Stanley H. Brown reviews setbacks of Meshulam Riklis as board chairman of Rapid-American Corp. and Mcrory Corp., running business empire assembled through leverage by buying small, undervalued company and using assets to buy bigger one. Huge debt due to failure to realize projected earnings and series of complex transactions to assure creditors noted. Stock price drops, 1962-63 chart. Oct 136-137, 236-240

Not-So-Free Silver. Trading in silver futures resumed after 29 years due to presumption U.S. Government was out of market and true "free market" restored. But Treasury selling at ceiling price, still limits speculation. Bache & Co. leading brokers, Irving Louis expert. PI Oct 232-234

Funds in Ferment. Mutual funds regain some appeal with sales for third quarters of 1963 over 1962 although total sales for year decline, particularly contractual plans due to SEC special study disapproving heavy sales-load charges. I.D.S. considers new sales-load formula for stretched-out commission. More speculative growth funds market also slumps. Shifting sales patterns 1954-63 chart. PI Nov 247-250

Playing the Toys. Big sales increase in toys for 1963 over 1962 indicated. Emergence of large stable of toymakers with young, aggressive managements applying new concepts in production marketing, diversification, research and development during past five years enhances investment appeal of toy industry stocks. PI Nov 250

INVESTMENTS, FOREIGN
See also CANADA; CHINA, NATIONALIST; FOREIGN EXCHANGE; JAPAN

Chrysler Corp. increases holdings in Simca Automobiles, S.A. to strengthen base in Europe. Studebaker Corp. buys control of Domowatt, S.p.A., Italian manufacturer of refrigerators and washing machines. BM Mar 52

Printing-Press Economy. Brazil's declining economy, economic reform plan, new law restricting profits on foreign capital causes foreign business to retrench. BG Mar 70

After de Gaulle's Thunder. Projects possible effects of De Gaulle's rebuff of Britain's move to join Common Market on U.S. investments in Britain and Continent. French proposed EEC limit direct foreign investment, 1957-62 charts. BG Apr 65-70

Optimistic World of Edgar Kaiser. Walter Guzzardi Jr. reviews Edgar Kaiser's vigorous management of Kaiser industrial complex, discusses new stage of growth and expansion, foreign ventures, performance of divisions and subsidiaries, 1962 earnings record. Plants, c.p. Apr 90-97, 214-219

Åke Kihlman chief executive of Oy Tampella AB one of Finland's leading industrial complexes, reshapes Tampella as international organization in wood products, machinery, textiles, emphasizing exports in open competition. BG Aug 80

Unfinished Job at W. R. Grace. Carl Rieser reviews transformation of family trading and shipping empire under President-chief executive Peter Grace. Retreat from major commitment in unstable Latin America. Big gain in revenues, 1962 earnings record. Aug 108-113, 228-232

Global Stake of U.S. Business. Analyzes huge increase in U.S. direct overseas investment since 1950 totaling $37 billion, Kennedy Administration's apprehension over potentially unfavorable effects, widening gap between rich and poor nations due to neglect of newly-developed nations, expansion in Common Market cutting into exports, and eroding of balance-of-payments situation. Foreign concern over economic domination, especially in Canada and France. Distribution country by country, charts, maps. Dec 129-131

INVESTMENT TRUSTS
See also BANKS & BANKING; INVESTMENTS

Lady and the Funds. Profiles Mrs. Lucile T. Wessmann editor of *Investment Companies, Mutual Funds and Other Types*, authoritative source book of U.S. investment companies, independent consultant to Arthur Wiesenberger & Co. Text precisely edited to avoid misinterpretation as promotional literature. PI Nov 248

Funds in Ferment. Mutual funds regain some investment appeal with sales for third quarter of 1963 over 1962, although total sales for year decline, particularly contractural plans due to SEC study disapproving heavy sales-load charges. I.D.S. considers new sales-load formula for stretched-out commission. More speculative growth funds market also slumps. Shifting sales patterns, 1954-63 chart. PI Nov 247-250

INVESTORS DIVERSIFIED SERVICES, INC. See INVESTMENT TRUSTS

IONIZATION, GASEOUS See PLASMA (IONIZED)

IRON
New cokeless smelting plant using Strategic-Udy process, big electric furnace to produce high-grade pig iron using inferior coal at government-owned Corporation Venezolana de Guayana in Venezuela. p. Pr Sep 174

Jungle Mesabi. Mékambo iron-ore deposit consisting of three mountains in remote part of Gabon is major find along Africa's South Atlantic Coast according to Paul Deutchman's report of recent tour. French Government promoted Somifer consortium to develop mine organized by Bethlehem Steel, and managed by Peter Telfair. New Gabon Government grants mining concession, map. BG Dec 81-84

IRRIGATION PUMPS See AGRICULTURE—EQUIPMENT

IRVINE, JAMES, I., JR. See IRVINE CO.

IRVINE, JOAN See IRVINE CO.

IRVINE CO.

88,000 Golden Acres Waiting for the Dust to Settle. Seymour Freedgood reports on family-held Irvine Co. controlling 138-square-mile Irvine Ranch which blocks growth of metropolitan Los Angeles. Board of directors clash over proposed urban development plan backed by James Irvine Foundation which controls company, and opposed by faction led by Joan Irvine, resolute granddaughter of J. I. Irvine, the late founder and still dominant power. Charles Thomas succeeds the late Myford Irvine as president of company. Chart of family tree. c.p. Nov 142-147, 252-267

IRVINE FOUNDATION See IRVINE CO.

IRVINE RANCH See IRVINE CO.

ISHIZAKA, TAIZO See JAPAN Jul 140

ITALSIDER See ITALY

ITALY

See also EUROPE; INVESTMENTS, FOREIGN

Church of the Florentine Businessmen. Color portfolio of 14th century Church of Or San Michele in Florence built on site of old grain market. Merchant guilds rulers of city-state financial center sponsored conversion as church and commissioned magnificent art embellishment. Jun 133-137

Half-Billion-Dollar Lace to Tie the Italian Boot. Portfolio of paintings by Hugo Wetli depicts new Autostrada del Sole, superhighway across the Appenines and Lombardy Plains from Milan to Bologna, Florence, Rome, and Naples. Road stimulates economy and ends isolation of many communities. Aug 102-107

Ernesto Manuelli president and general manager of Finsider, partly government-owned giant steel complex. Big expansion program to double output. BG Oct 76

Steel Company in the World of Culture. Colored portfolio shows examples of distinguished design and fine arts program of Italsider, state-controlled steel company. Oct 138-141

IWASA, YOSHIZANE See JAPAN July 136

J

JACKSON, HARRY See AMERICAN PETROFINA, S.A.

JACOBS, WALTER See HERTZ CORP. Oct 120-122

JACOBSEN, ALFRED See AMERADA PETROLEUM CORP.

JAKOPP, HEINRICH. See KLÖCKNER HUMBOLDT-DEUTZ

JAPAN

See also SINGER CO. Dec 146

Japan: The Open Door with a Catch. Louis Banks analyzes moves to liberalize foreign-trade regulations and foreign-investment restrictions in terms of probable effect on free-world business. Three-sided debate on extent of free market and future of rapidly growing economy since 1950's, with industrialist builders of light industries favoring open competition, government and bureaucracy limited protection, and resurgent zaibatsu industrial and banking combines total restraint and revival of cartels "catch" to open door. Top business executives and bankers with brief sketches. c.p. Jul 134-141, 266-278

Japan's Prime Natural Resources Is People. Portfolio of colored photographs and notes on present-day Japan, dense population, industry, plants, construction including Tokyo subway and superhighway, skilled labor and white-collar workers, customs. Jul 142-149

JARMAN, W. MAXEY See GENESCO INC.

JCRR See CHINA, NATIONALIST

JEPPSON, JOHN, II See NORTON CO. Aug 118

JET AIRPLANES See AIRCRAFT INDUSTRY; AIR LINES; TRAVEL

JET ENGINES See AIRCRAFT INDUSTRY

JEWELS See GEMS

JOHN, E. ROY See MEDICINE Feb 192

JOHN BIRCH SOCIETY See CONSERVATISM Dec 109

JOHNSON, HOWARD, CO. See HOTELS July 164

JOHNSON, LEE S. See UNITED AIRCRAFT CORP. Dec 216

JOHNSON, NORRIS O. See TAXATION Jan 74

JOHNSON, RICHARD E. See RAILROADS

JOINT COMMISSION ON RURAL RECONSTRUCTION See CHINA, NATIONALIST

JONATHAN LOGAN, INC.

$100 Million in "Rags". Seymour Freedgood reports Bobbie Brooks, Inc. and Jonathan Logan, Inc. at top of $4-billion women's outerwear industry as result of meeting 1950's demand for moderately-priced casual and sportswear and adoption of modern management practices. JOL a loosely coordinated group headed by David Schwartz. Notes mergers and diversification, European-type double-knit jersey venture. c.p. May 151-162

President David Schwartz in letter to editors points out misleading statements on management in FORTUNE article. Jun 25

JONES & LAUGHLIN STEEL CORP.

New chairman and chief executive Charles M. Beeghly one of assets of Cold Metal Products Co. merger in 1957 (now Strip Steel Division). Succeeds Avery C. Adams retiring. Company's position strong with advanced technology keeping costs down and concentration on flat-rolled steel offsetting foreign competition. p. BM Jun 53

JORDAN, MAURICE See BUSINESSMEN—EUROPE Aug 98

JUNOD, ETIENNE See DRUGS Dec 127

JUSTERINI & BROOKS LTD. See LIQUOR Oct 76

JUSTICE, DEPARTMENT OF

See also ANTITRUST; TAXATION

"What the Hell Do Those Fellows Want?" Editorial reviews Kennedy Administration's use of wide discretionary powers, citing case of Justice Dept. pressure for business contributions for Cuban prisoners ransom fund. Feb 81-82

General Aniline Goes Private. Irwin Ross assesses present conditions and prospects of General Aniline & Film Corp. pending final sale to private owners by Justice Dept., administrators since 1942 seizure by government as enemy property. Discusses Kennedy Administration management, performance of various divisions, 1962 sales and profit gain. Sep 127-129, 144-156

K

KAISER, EDGAR F. See KAISER INDUSTRIES CORP.

KAISER, HENRY J. See KAISER INDUSTRIES CORP.

KAISER ALUMINUM & CHEMICAL CORP. See KAISER INDUSTRIES CORP.

KAISER ENGINEERS See KAISER INDUSTRIES CORP.

KAISER INDUSTRIES CORP.

Optimistic World of Edgar Kaiser. Walter Guzzardi Jr. reports on Edgar Kaiser's vigorous management of industrial complex headed by Kaiser Industries and Henry J. Kaiser Co. Notes new stage of growth, foreign ventures, performance of divisions and subsidiaries, Kaiser Aluminum & Chemical, Permanente Cement Co., Kaiser Steel, Kaiser Engineers, Willys Motors, 1962 earnings record; Henry Kaiser's Hawaii Kai project. Plants. c.p. Apr 90-97, 214-219

President Edgar F. Kaiser of Kaiser Industries Corp. and Kaiser Steel Corp. denies Internal Revenue claim for back taxes, plans to file protest. p. BM Jun 56

KAISER STEEL CORP. See KAISER INDUSTRIES CORP.; LABOR May 113

KALVAR CORP.

Kalvar: From a Wastebasket, Dazzling Suspense. Stephen Mahoney appraises Alfred J. Moran's venture to promote dry-process instant-developing photographic film using simple heat method; notes main uses in four different fields, and development technique (diagram). Points out uncertain future due to competition of big companies researching similar product and question of patent protection; profitless thirteen-year history. Mar 110-112, 132-138

KAPPEL, FREDERICK See MANAGEMENT Nov 72

KARNOW, STANLEY (AUTHOR)

How Communist Economics Failed in China. Detailed account of Communist China's failure to forge modern industrial nation with speed-up industrialization plan. July 154-157, 230-238

KARR, H. NEAL See SINGER CO. Dec 146

KATANGA See CONGO

KAY, HUBERT (AUTHOR)

There's No Stopping REA—Or Is There? Reviews REA-financed rural electric co-ops rapid growth in competition with electric-power companies, invading nonfarm territories and threatening federally-subsidized, tax-free nationalized system. Proposes independence from government. Feb 118-121, 170-184

Strange Leveling Off in Land. Examines flattening out of long national land boom, sales and prices, based on FORTUNE survey of twenty metropolitan areas and soundings in fifty-three others. Discloses four uniform market groups. Case for higher property tax as step toward freeing market for needed construction in line with projected demand. Oct 124-129, 214-222

KELSEY-HAYES CO.

Wilfred D. MacDonnell takes over as president and chief executive officer. p. BM Feb 54

KENDALL, DONALD M. See PEPSI-COLA CO.

KENNECOTT COPPER CORP. See AMERICAN SMELTING & REFINING CO.

KENNEDY, JOHN F.

See also TAXATION; UNITED STATES

Who's That on Our Flank? Editorial endorses Administration's '63 tax-cut proposal points up long-term deficit threat to economic freedom implied in appointment of deficit financing advocate John P. Lewis, a Harvard economist to Council of Economic Advisers. Jan 68

"What the Hell Do Those Fellows Want?" Editorial reviews cool climate of business-government relations in view of Administration's tendency to employ wide discretionary powers of federal government. Some policy moves to better business-government relations have been largely ineffective. Feb 81-82

Mr. Kennedy's Management of the News. Dean of Washington correspondents Arthur Krock analyzes news-management policy, direct and indirect techniques, including special treatment of reporters preventing objectivity. Mar 82, 199, 202

What Went Right. Editorial reviews U.S. economy's optimistic turnaround since gloomy spring of 1962, Administration's new let-alone approach toward business, reasonable reaction to 1963 steel price move. May 103-104

"Medicare," the Cure That Could Cause a Setback. Harold B. Meyers examines Administration's 1963 program for old-age health insurance linked to social-security system. May 131-133, 167-179

1963 omnibus federal-aid-for-education bill calls for loan program for academic buildings. **College Architecture: The Economics and the Aesthetics.** May 150

How Good Is the Kennedy Style? Editorial criticizes economic approach in public discussion of tax-cut proposals and Administration fiscal policy, budget, deficit issue as incoherent. Jun 91-92

Wanted: New Men. Editorial endorses Kennedy proposal for liberalization of laws restricting immigration, calling for new criteria giving top priority to skills. Oct 100

Now It's an Agonizing Reappraisal of the Moon Race. Richard A. Smith reviews growing doubts about space program with prospect of drastic realignment in next two years, especially Apollo moon project; President prime mover of change of pace. Nov 124-129, 268-280

Inexhaustible Riches from the Sea. George A. W. Boehm reports surge of scientific interest in oceanographic research as storehouse of new wealth in minerals and cheap food; a new Kennedy Administration ten-year government coordinated program. Dec 132-137, 218-229

KENNEDY, JOSEPH P.

Joseph P. Kennedy: Portrait of the Founder. Richard Whalen profiles President's father, traces his rise as capitalist and his public career, discusses his successful speculative investment deals in banking, moving, pictures, real estate, liquor and oil. p. Jan 111-118, 156-168

KENNEDY, ROBERT See ANTITRUST Sep 127

KERR-MILLS ACT See MEDICINE May 132

KETTERING, CHARLES F. See GENERAL MOTORS CORP.

KEYNES, JOHN MAYNARD, BARON See ECONOMICS

KHRUSHCHEV, NIKITA

"This Is the Absolute End". FORTUNE cites Khrushchev speech protesting poor crop on Volgo-Don state farm to illustrate Russian agricultural mismanagement and basic faults in Soviet government planning. Nov 122

KIDDER, A. M., & CO.

Sells assets to Reynolds & Co. and Francis I. du Pont & Co. C. Michael Paul controlling stockholder inherited stock from late wife, the former Mrs. Charles U. Bay. p. BM Jul 108

KIHLMAN, ÅKE See TAMPELLA OY-AB

KILLIAM, KEITH F. See MEDICINE Feb 192

KIMBALL, DAN See AEROJET-GENERAL CORP.

KING-ANDERSON BILL See MEDICINE May 168

KINNEY, G. R., CO. See ANTITRUST Dec 192

KIRBY, ALLAN P. See ALLEGHANY CORP.

KIRBY SHOE CO. See ENDICOTT JOHNSON CORP.

KIRCHER, DONALD P. See SINGER CO.

KITT PEAK NATIONAL OBSERVATORY See ASTRONOMY

KLABIN, ISRAEL See KLABIN IRMAOS & CIA.

KLABIN DO PARANA DE CELULOSE S. A. See KLABIN IRMAOS & CIA

KLABIN IRMAOS & CIA.

Brazil's Israel Klabin, a young man preoccupied with the expansion of family business and the health of Brazil's economy, is one of four family partners and unofficial president of the company, a collection of agricultural and industrial investments including Klabin do Parana de Celulose S.A. p. BG Mar 64

KLAW, SPENCER (AUTHOR)

Soap Wars: A Strategic Analysis. Detailed account of three big soap companies' marketing strategies, tactics competing for $900-million heavy-duty laundry soaps and detergents market. Jun 122-125, 182-198

KLÖCKNER HUMBOLDT-DEUTZ

Heinrich Jakoff, president of German diversified manufacturing and engineering firm, has two projects under way: truck and bus plant for Egyptian Government and new modern headquarters for Klöckner. p. BG Jul 118

KLOTZBURGER, EDWIN C. See GENERAL MOTORS CORP. Jun 103

KNITWEAR See CLOTHING May 156

KNOPF, MAURICE J. See MCGRAW, F. H., & CO.

KNUDSEN, SEMON E. See GENERAL MOTORS CORP. Jun 102

KONER, MARVIN

Minuteman's New Home on the Montana Range. Portfolio of colored photographs on solid-fueled Minuteman missile armed with thermonuclear warhead in underground launching silos. Aug 124-130

KORTH, FRED See CONTRACTS, GOVERNMENT Apr 111

KRESS, S. H., & CO.

Genesco Inc's Maxey Jarman offers to buy Kress Foundation stock above the market but offer is rejected. Jarman tries to appeal to Kress stockholders directly. Kress's influential trustee and Chairman Paul L. Troast cited. p. BM Sep 64

W. Maxey Jarman becomes chairman and chief executive after Genesco finally acquires control. Kress Foundation sells stock. p. BM Dec 70

KROCK, ARTHUR (AUTHOR)

Mr. Kennedy's Management of the News. Dean of Washington correspondents analyzes President John F. Kennedy's news-management policy. Krock's career as journalist. Mar 82, 199, 202

KUBITSCHEK, JUSCELINO See BRAZIL Mar 64

KUIN, PETER See MANAGEMENT Nov 76

KULUKUNDIS, MANUEL E. See SHIPPING

KUZNETS, SIMON See STATISTICS Oct 144

KYES, ROGER M. See GENERAL MOTORS CORP. Jun 101

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LABOR

See also PRODUCTION

Lockheed's Logic. Editorial praises Lockheed Aircraft Corp. Chairman Courtlandt Gross' strong stand against compulsory unionism as invasion of private rights in answer to President Kennedy's collective bargaining theory and government board's proposal in machinists' union dispute. Jan 68

Job Analysis. Productivity gains during past two years with prospect for continuing advance along with G.N.P., employment, manufacturing, private nonfarm, 1950-62 charts. Lag in growth of labor force due to earlier retirement, younger men staying in school longer. BR Feb 44, 46

"What the Hell Do Those Fellows Want?" Editorial reviews cool climate of business-government relations due to Kennedy Administration's tendency to employ wide discretionary powers. Examples include threat to cancel government contracts to force aerospace industry to accede to union shop. Feb 82

Seafarers Union "arrests" ten of Manuel Kulukundis' ships to recover part of his debt to union, p. BM Apr 52

Outlook for employment rise. BR May 43

Labor Unions Are Worth the Price. Max Ways assesses the importance of American unionism and collective bargaining to free-market economy, with benefits outweighing economic costs; discusses new wave of anti-unionism influenced by Kennedy Administration activist labor policy, and liberal intellectuals' demand for government regulation of terms of labor and wage-fixing. Vigor of four biggest unions, dedicated leaders (p.), strikes' slight effect on work time, uneven advance of labor movement, 1900-60 (charts) noted. May 108-113, 238-254

Forecast upturn in wages with labor market tightening in next 18 months. BR Jul 46

Nonfarm employment rises with unemployment dropping in first half of 1963; 1960-63 chart. BR Sep 43

Going First-Class. Editorial notes merchant seaman flies first class from Athens to Los Angeles for minor operation, his discussion with seat mate on unemployment problem due to low-cost competition of foreign merchant sailors and his need for high wages to meet cost of living and personal luxuries. Sep 92

Hell of a Different Way to Run a Railroad. Harold B. Meyers reports on Southern Railway modernization, automation to contain costs and build efficiency. Stops hiring firemen as answer to featherbedding deadlock. Sep 100-102, 210-227

Off the Tracks. Editorial endorses Congress bill recently passed to avert national rail strike after four-year deadlock on dispute, but points out it is a form of compulsory arbitration leading to extended government regulation of wages and prices. Arbitration board to settle size of work force and elimination of firemen on diesel trains. Lesser issues to be negotiated by companies and unions. Warns against compulsory arbitration as pattern for future disputes. Oct 100

Ride on the Rails. Chronology of frantic burst of stock market trading in rail stocks, touched off by series of confusing midafternoon announcements on threatened rail strike. PI Oct 231-232

NLRB's New, Rough Line. M. R. Lefkoe examines Kennedy majority's use of vast discretionary power in broad interpretation of labor laws infringing rights of management; recent critical cases over picketing, secondary boycotts, free speech on the part of employers. Widespread criticism of businessmen, legal profession, and Congressmen, points up need for far-reaching reform, drawings. Nov 164-166, 172-178

Voice from the Dark Ages. Short editorial criticizes U.S. Steel Corp.'s use of "economic power" to enforce better race relations in Birmingham as beyond the scope of corporate activity. Recalls how corporations tried to enforce ideas on employees sixty years ago. Dec 102

Canada

New government plans to relieve unemployment tied to export industries. **Pearson's Frontier.** BG Jul 114

China

How Communist Economics Failed in China. Stanley Karnow's detailed account of failure to forge modern industrial nation. Government revising Five-Year Plan targets, re-emphasizes agriculture to meet severe food shortage. New rural organization, "production teams" replacing "people's communes" free-market incentives for peasants, p. Jul 154-157, 230-238

Germany

Foreign apprentice programs for teen-agers to meet shortage. Attitudes criticized. **Old Europe's Young Again—and Fretting.** Feb 222

India

Proposed labor-intensive manufactures to absorb mass unemployment. **What's Wrong with Planning: The Case of India.** Jun 148

Japan

Japan's Prime Natural Resource Is People. Portfolio of colored photographs and notes on present-day Japan, skilled labor and white collar workers. Jul 142-149

Revolutionary changes, shortage, recruiting, raiding, mobility discussed in **Japan: The Open Door with a Catch.** Jul 266, 271

LAHEY CLINIC See MEDICINE Apr 123

LAKE ERIE COLLEGE See COLLEGES & UNIVERSITIES May 144

LAMONT, THOMAS S. See TAXATION Jan 74

LAMONTAGNE, MAURICE See CANADA Jul 114

LAND

See also AGRICULTURE; BUILDING; REAL ESTATE; NEW JERSEY

Esso Research Ltd. develops oil-spraying technique to stablize shifting sand to permit growth of windbreak trees and other ground cover. Potential value in reclaiming marginal desert area. p. Pr Sep 180

Faces and Prices of the National Estate. Portfolio of colored photographs and notes on size of U.S. national estate, acreage, price range from $4 to $9 million; public domain. Oct 125-127

LANDRUM, PHIL M. See NATIONAL LABOR RELATIONS BOARD

LANDRUM-GRIFFIN ACT See NATIONAL LABOR RELATIONS BOARD Nov 164

LANGMUIR, IRVING See PLASMA (IONIZED) Aug 134

LASERS

Experimental lasers made by unique plastic cylinder system at Electro-Optical Systems, Inc. to increase range of light frequencies for optical surveillance systems. p. Pr Feb 160

Laser's Dazzling Future. Lawrence Lessing reviews rapid development of coherent light amplifier, opening up new region of electromagnetic spectrum with broad immediate and potential applications in communications, industrial tools, scientific instruments, weaponry. Varied laser forms are gaseous, solid optically-pumped ruby and injection crystal, glass, liquid or plastic, diagrams. $30 million spent in 1963 by over 400 companies, universities, and military. $1 billion business foreseen by 1970. c.p. Jun 138-142, 151-166

LATHES

Power-assisted lathe with super-sensitive precision controls equivalent to manually-controlled lathes made by Spincraft, Inc. p. Pr Dec 188

LATIN AMERICA

See also GRACE, W. R., & CO.; MEXICO; PANAMA; UNITED STATES—FOREIGN RELATIONS

Importance of Latin America's Elite. Deltec Panamerica Director Julio Nunez (sketch) urges reappraisal of U.S. policy toward underdeveloped nations; points out Alliance for Progress fallacy of overstressing elimination of poverty to deter Communist appeal, and cites decline of Western leadership as underlying cause for upheaval with Castro's Cuban revolution example. Advises U.S. aid in rejuvenating this elite in Latin America, encourage reforms. Jan 70, 210

Depressed Cork. Philip Siekman's on-the-scene report of critical situation in Argentina, deepening depression with price inflation, unemployment, mounting debt, money and exchange difficulties, drifting puppet government of new President. Lesson in frustration for U.S. aid program. p. BG Feb 65-77

Printing-Press Economy. Report on Brazil's big balance-of-payments deficit, foreign debt, depleted gold and foreign exchange, mounting price inflation threatening economic chaos. Government undertakes palliatives, drafts economic reform plan. BG Mar 63-75

Brazil's young Israel Klabin, preoccupied with expansion of family business and the health of Brazil's economy, is one of four family partners and unofficial president of Klabin Irmãos & Co. a collection of agricultural and industrial investments. BG Mar 64

New Communist Patterns in Latin America. Charles J. V. Murphy assesses changes in party tactics during past five years, political consequences of Fidel Castro, three distinct patterns in three countries with targets, parties and personalities of the constitutionalist center and left. In Mexico strength wanes but remains base for action. In Brazil party infiltrates labor unions, Army student groups, leads peasant leagues in impoverished Northeast. Terrorism increases in Venezuela as President Betancourt nears end of term. Considerations for U.S. policy making. c.p. Oct 102-107, 150-168

LAW

Two Concepts of Law. Editorial points out premise of stronger law and limited powers of government underlies Athens conference of lawyers on World Peace Through Law and Washington debate on civil-rights bill; contrasted to denial of individual rights shown in pamphlet distributed by Brussels Reds. Aug 91-92

LAWRENCE, HARDING L. See CONTINENTAL AIRLINES Feb 131

LAWRENCE RADIATION LABORATORY See CALIFORNIA, UNIVERSITY OF

LEAD See AMERICAN SMELTING & REFINING CO.

LEADER, CHARLES C. See GENERAL ELECTRIC CO. May 121

LEAK DETECTOR See TESTING

LEASES & RENTALS

It's Hertz Itself in the Driver's Seat. Stephen Mahoney reports on leading car and truck rental and leasing business, with consistent profits showing despite keen competition. Efficient management of new executive team and aggressive merchandising advantages in growing market. Hertz American Express foreign venture a success. Oct 118-123, 224-228

LEBANON

Yusuf Bedas develops Intra Bank, S.A., founded as currency-exchange shop in Beirut fifteen years ago, into leading bank of Arab world with numerous branches in Middle East, Africa, Europe, Brazil. BG Apr 66

"Monopoly Game". Real-estate boom in Beirut with skyscrapers replacing old houses and ultra-modern apartments studding outskirts due to investments by Lebanese emigrants and Arab aristocrats, sheiks and sultans. Recent deals include hotels. Prices of houses and land jump. p. BG Jun 76

LEEDOM, BOYD See NATIONAL LABOR RELATIONS BOARD Nov 165

LEES, DAVID See PHOTOGRAPHY

LEFFLER, ROSS L. See BUSINESSMEN Mar 118

LEFKOE, M. R. (AUTHOR)

Strange Case of Sun Oil. Reviews in detail Sun Oil Co. six-year-old FTC case involving discriminatory discount to franchised dealer to meet independent's price war. Aug 117, 158, 163

NLRB's New, Rough Line. Examines new National Labor Relations Board's use of vast discretionary power in broad interpretation of labor laws infringing rights of management, recent critical cases over picketing, secondary boycotts, free speech on the part of employers. Nov 164-166, 172-178

LEHMAN BROTHERS

See also CONTINENTAL AIRLINES Feb 194

General Lucius Clay becomes partner. p. BR Mar 52

LEOPOLDVILLE See CONGO Feb 84

LERNER STORES CORP. See MCCRORY CORP. Oct 136

LESSING, LAWRENCE (AUTHOR)

Laws Alone Can't Make Drugs Safe. Case against new legislation controlling drugs and stiffened FDA regulations which may impose new burdens on pharmaceutical companies without significantly promoting drug safety. Mar 122-125, 143-156

Laser's Dazzling Future. Roundup of rapid development of light amplifier with unique and versatile properties, opening up new region of electromagnetic spectrum, broad immediate and potential aplications in communications, industrial tools, scientific instruments, weaponry. Jun 138-142, 151-166

Transistorized MD. Reviews promising developments in new field of medical electronics, continuous monitoring of patient's physiological reactions in all stages of care, computer analysis of data to improve accuracy of diagnosis, surgery, hospital and nursing care, leading developers. Sep 130-134, 204-208

LETTUCE PACKING PLANT See AGRICULTURE—EQUIPMENT

LETWIN, WILLIAM (AUTHOR)

What's Wrong with Planning: The Case of India. Analyzes fallacy that national economic planning fosters maximum growth, a worldwide popular theory especially in underdeveloped countries. Test case is India's experience with five-year plans emphasizing heavy industries, inefficient steel mills. Jun 118-121, 144-151

India Article Challenged. M.I.T. faculty group criticizes article on economic planning. FORTUNE replies. Aug 94

LEVERAGE See CORPORATIONS

LEVER BROTHERS

Soap Wars: A Strategic Analysis. Spencer Klaw's detailed account of three big soap companies' marketing strategies competing for heavy-duty laundry soaps and detergents market, based on disclosures of previously-secret records at recent antitrust trial on Lever deal with Monsanto Chemical. Ill-starred Surf, Rinso Blue, success with All. Huge advertising outlays, chart. Jun 122-125, 182-188

LEVIEN, FRANCIS S. See UNIVERSAL AMERICAN CORP.

LEWIS, JOHN P. See COUNCIL OF ECONOMIC ADVISERS

LIBERALISM See UNITED STATES —POLITICS

LIFE INSURANCE See INSURANCE

LIFT TRUCKS See TRUCKS & TRUCKING

LIGGETT & MYERS TOBACCO CO.

See also TOBACCO

President Zach Toms named chief executive succeeding retired Chairman W. A. Blount. Counts on new ad agency and new brand, king-sized Lark with new type filter, to stem sales decline. Licenses Swiss firm. p. BM May 75

LIGHT

See also LASERS

Plasma jet radiation directed through quartz lens in continuous beam of metal-cutting white light developed by Westinghouse Research Laboratory. p. Pr Jul 215

LIMESTONE See CEMENT

LINCOLN, MURRAY See ALLEGHANY CORP.

LING, JAMES J. See LING-TEMCO-VOUGHT, INC.

LING-TEMCO-VOUGHT, INC.

Vice Chairman James J. Ling named chief executive succeeding Robert McCulloch who remains chairman. p. BM Mar 56

LIONEL CORP.

Chairman Victor Muscat of B.S.F. Co. and president of Defiance Industries, Inc. is one of group taking over Lionel Corp. p. BM Jun 56

LIQUID ASSETS See CORPORATIONS; CREDIT

LIQUID HYDROGEN See HYDROGEN

LIQUID METALS See METALS

LIQUOR

Distillers Co. Fights Back. Distillers Co. Ltd., Scotland's biggest Scotch whisky producer, markets new light versions of two brands and relaxes ban on bulk shipments. Aggressive steps to meet stiff competition of independents, especially in U.S. market, aggravated by increase in maturing stocks despite big rise in world market, consumption since 1956. European Common Market potential. Company also diversifies into chemicals, food, plastics. March 31, 1963 earnings record. Blending method, p. BG Oct 75-81

LIST, ALBERT See MCCRORY CORP. Oct 240

LITTON INDUSTRIES

When the Crowd Goes One Way Litton Goes the Other. Carl Rieser reviews tremendous ten-year growth, diversification in unusual phases of electronic components, military controls, business machines, computers, shipbuilding, underwater exploration, civilian products with superb timing and choice of markets. 37 mergers include Monroe Calculating, Ingalls Shipbuilding. Worldwide scope. Freewheeling top management team of Thornton, Ash, and heads of five groups of divisions. Future turns on push for profits. Giant tracking antenna for Telstar. c.p. May 114-118, 220-228

LIVINGSTON, ROBERT I. See HELLER, WALTER E., & CO.

LOADING MACHINES
See also AGRICULTURE—EQUIPMENT; CRANES & DERRICKS; EXCAVATING MACHINERY; OIL EQUIPMENT

Self-propelled carrier designed to load and unload semitrailers on flatcars with lifting capacity of 30 tons and able to select a container from the middle of a car, made by Towmotor Corp. p. Pr Mar 162

Side loader, designed and built by Dempster Brothers, Inc., mounted on truck chassis has two arms which pick up a container from flatcar and load on trailer. p. Pr May 186

LOANS See CREDIT; RURAL ELECTRIFICATION ADMINISTRATION; UNITED STATES—FOREIGN RELATIONS

LOBBYING See RURAL ELECTRIFICATION ADMINISTRATION

LOCKHEED AIRCRAFT CORP.

Lockheed's Logic. Editorial praises Chairman Courtlandt Gross' strong stand against compulsory unionism as invasion of private rights in answer to President Kennedy's collective bargaining theory and government board's proposal in machinists' union dispute. Jan 68

LOCKS See BANKS & BANKING

LOCOMOTIVE FIREMEN AND ENGINEMEN, BROTHERHOOD OF See LABOR

LOCOMOTIVES See RAILROADS

LOEB, CARL M. See LOEB, CARL M., RHOADES & CO.

LOEB, CARL M., RHOADES & CO.

Wherever You Look, There's Loeb, Rhoades. T. A. Wise reviews rocketing growth of 32-year old Wall Street investment banking firm through investment fund management, underwriting, brokerage, and venture capital deals under astute senior partner John L. Loeb. Discusses moves to control Cities Service via Cuban Sugar, Argentine oil, interests in Twentieth-Century Fox, Curtis Publishing, Eddie Gilbert and E. L. Bruce-Celotex merger. Apr 128-131, 145-157

Of Men, Money, and Marriage. Describes how success of Carl M. Loeb, Rhoades & Co. derives from men, money, and marriage. Founding by German immigrant Carl M. Loeb after resigning presidency of American Metal Co. with son John L. Loeb in 1931. Initial operations, Rhoades merger, acquisition of broad capital foundation through fortunes of partners and family marriages. Apr 131-132

LOEB, JOHN L. See LOEB, CARL M., RHOADES & CO.

LONDON STOCK EXCHANGE See STOCK MARKET

LONE STAR CEMENT CORP.

President John H. Mathis named chief executive; company promotions, p. BM Jul 102

LONGSHOREMEN'S & WAREHOUSEMEN'S UNION, INTERNATIONAL See LABOR May 108

LOPEZ MATEOS, ADOLFO See LATIN AMERICA Oct 105

LORILLARD, P., & CO.
See also TOBACCO

President Morgan J. Cramer Jr. new chief executive officer replacing Lewis Gruber who remains chairman. p. BM Jan 39

LOS ANGELES, CALIFORNIA See CALIFORNIA; OFFICE BUILDINGS

LOSS, LOUIS See TRANSITRON ELECTRIC CORP. Mar 192

LOUIS, IRVING J. See COMMODITIES

LUBAR, ROBERT (AUTHOR)

Underdeveloped Government. Reports European Economic Community's growing power, nine-man bureaucratic Commission in Brussels, with Walter Hallstein president. Discusses Action Program blueprint to extend economic planning. BG Jan 51-58

Old Europe's Young Again—and Fretting. Reports on recent trip and talks with business and government leaders on Europe's widespread prosperity, industrial vigor, and problems, evolution of U.S.-type economic environment with coming of Common Market. Feb. 86-91, 218-222

It's an International "Farm Mess" Now. Collaborating with Michael A. Heilperin, probes protectionist agricultural polices of Common Market countries which hinder drafting of EEC common farm policy. May 134-137, 210-216

LUCAS, JOSEPH, (INDUSTRIES) LTD.

Monopoly Is Embarrassing. Reports dominant British producer of automotive electrical gear and parts under antitrust investigation, facing strong competition at home and abroad; notes diversification in non-automotive field, expansion on European Continent, partnerships in France, Italy, new German brake factory, C.A.V. subsidiary in diesel fuel injectors, mergers including Thomson-Bennett Magnetos Ltd. Despite all time 1962 sales record, profits cut by slow returns on foreign ventures. BG Sep 80-87

LUDWIG, DANIEL K. See UNION OIL CO. OF CALIFORNIA

LUKE, DAVID L., III See WEST VIRGINIA PULP & PAPER CO.

LUMBER & LUMBERING

Lumber-grading machine making stiffness measurements, developed by Potlatch Forests, Inc. and Industrial Science Co. p. Pr May 192

High-speed water jet unit cuts through thick maple plank, with extra-thin cuts reducing sawdust, in University of Michigan research project partly financed by U.S. Forest Products Laboratory. p. Pr Jun 171

MacMillan, Bloedel & Powell River Ltd., British Columbia timberland, pulp, plywood, shingles complex, reorganized and modernized by Board Chairman John V. Clyne during past six years. BG Dec 82

LURIA BROTHERS INC. See ANTITRUST Aug 116

LYTTON, BART See SAVINGS Jul 261

M

M.A.A. See MEDICINE

McCABE, THOMAS B. See Scott Paper Co. Apr 122

McCARTHY, MICHAEL W. See MERRILL LYNCH, PIERCE, FENNER & SMITH INC.

McCOLLUM, LEONARD F. See CONTINENTAL OIL CO.

McCONNELL, JAMES B. See MEDICINE Feb 192

McCRORY CORP.

Who's to Blame for Riklis— Riklis? Stanley H. Brown reviews setbacks under Board Chairman Meshulam Riklis, huge debt due to failure to realize projected earnings, stockholder suits charging conflict of interest. Series of complex transactions to assure creditors include stock buying, liquidation of money-losing divisions. Decline in stock price, 1962-63 chart. Oct 136-137, 236-240

McDONALD, DAVID J. See LABOR May 113

McDONALD, JOHN (AUTHOR)

Big New Kicker at Asarco. Reports American Smelting & Refining Co.'s improved prospects as result of big shift into copper mining, ending 1952-62 decline due to drop in lead, zinc markets, Mexican mine problems; new mines in Arizona, Peru, Australia. Jan 77-83, 132-143

Where's the Ceiling on New Houses? Analyzes outlook for builders of single-family houses in 1960's, new complexities with rising land costs, building codes, legal and moving costs in trading up to better houses. c.p. Jun 128-132, 216-223

MacDONNELL, WILFRED D. See KELSEY-HAYES CO.

MacEACHEN, ALLAN See CANADA Jul 113

McFARLAND, M. CARTER See BUILDING Apr 100

McGINNIS, PATRICK B. See RAILROADS

McGRAW, F. H., & CO.

President Maurice J. Knopf takes over responsibilities of Chairman Clifford S. Strike, resigning. 1962 losses due to diversification. p. BM Jul 102

MACHINERY See CAPITAL GOODS; specific types, e.g., AGRICULTURE—EQUIPMENT; CRANES & DERRICKS; EXCAVATING MACHINERY; TAMPELLA OY-AB

MACHINE TOOLS
See also NORTON CO.

Thermoelectric refrigerating unit which reduces temperatures on cutting tip, prolonging life of tool and allowing higher cutting speeds, made by Meyers Electric Cooling Products, Inc. p. Pr Oct 192

MACHINISTS, INTERNATIONAL ASSOCIATION OF See LABOR Jan 68, May 112

McNAMARA, ROBERT S. See CONTRACTS, GOVERNMENT

MacMILLAN, BLOEDEL & POWELL RIVER LTD.

Board Chairman John V. Clyne during past six years has reorganized and modernized Canadian complex of British Columbia timberland, pulp, newsprint, plywood, specialty papers into tight money-making operation. 1962 earnings record noted. p. BG Dec 82

McNEILL, ROBERT E., JR. See BANKS & BANKING

McQUADE, WALTER (AUTHOR)

College Architecture: The Economics and Aesthetics. Discusses generally poor achitectural quality of new U.S. college structures and reasons. May 148-150

Industrial Designer with a Conspicuous Conscience. Reviews Eliot Noyes' success as industrial designer, architect, corporate consultant, exponent of "clean" machine design and moral approach. Aug. 135-138, 183-190

MACY, R. H., & CO. See STORES Dec 232

MAGNA CORP. See THOMPSON RAMO WOOLDRIDGE INC. Feb 146

MAGNETOHYDRODYNAMIC GENERATORS See PLASMA (IONIZED) Aug 227

MAGNETS

Deep-frozen superconductive magnet cooled in liquid helium made by Avco-Everett Research Laboratory. p. Pr Jan 148

MAGOUN, HORACE W. See MEDICINE Feb 191

MAHONEY, STEPHEN (AUTHOR)

Kalvar: From a Wastebasket, Dazzling Suspense. Appraises Kalvar Corp. Alfred J. Moran's venture to promote dry-process instant developing photographic film using simple heat method, now facing big uncertain future due to competition. Mar 110-113, 132-138

It's Hertz Itself in the Driver's Seat. Reviews leading car and truck rental and leasing business's efficient operational and financial management, new executive team and aggressive merchandising advantages in growing market. Oct. 118-123, 224-228

MAIMAN, THEODORE H. See LASERS Jun 142

MALIK, CHARLES See MANAGEMENT Nov 72

MALLET, LEONARD C. See UNITED AIRCRAFT CORP. Dec 113

MALMSTROM AIR FORCE BASE See UNITED STATES—DEFENSES

MANAGEMENT
See also COAL; GENERAL MOTORS CORP.; LABOR; STANDARD OIL CO. (N.J.)

Bringing Engineers Up to Date. George A. W. Boehm reviews new retraining courses to update engineers in basic new scientific concepts needed to understand and direct younger specialists. Inaugurated by U.C.L.A.

with six-week cram course and adapted by G.E. for company staff. Other engineering schools explore similar programs. High cost an obstacle, drawing. May 120-121, 179-180

Let's Inc. Christian Castberg's one-act playlet in words and drawings satirizes organization of corporate enterprise with advice of professional management consultant. Jun 210-215

Summit Meeting of Management. Thirteenth International Management Congress, sponsored by Comité International de l' Organisation, convenes at New York's Hilton Hotel. Theme Human Progress Through Better Management. Highlights of keynote opening speech by David Rockefeller include proposal for Managerial Task Force of Free Enterprise. Executives from major industries among delegates. p. Nov 71-78

MANAGEMENT CONSULTANTS

See also MANAGEMENT; NOYES, ELIOT

Robert Heller sells stock to associates who choose Lawrence T. Mayher as president. p. BM Dec 70

MANGANESE See OCEANOGRAPHY Dec 218

MANHATTAN See NEW YORK (CITY)

MANHEIM, FRANK See HERTZ CORP.

MANNED SPACE FLIGHT, OFFICE OF See NASA

MANSHOLT, SICCO See COMMON MARKET Jan 52

MANUELLI, ERNESTO See STEEL—ITALY

MANUFACTURERS HANOVER TRUST CO. See BANKS & BANKING

MANUFACTURES See CAPITAL INVESTMENTS; CREDIT; PRODUCTION; INDIA

MAO TSE-TUNG See CHINA, COMMUNIST Jul 157

MAPS

See also under subject headings.

Mapping the Face of the Moon. Portfolio with short report on preliminary geological and topographical maps of U.S. Air Force's Aeronautical Chart and Information Center and Geological Survey for NASA. Giant map-making project to map entire surface of moon in detail. Nov 130-133

Commap automated map-making system developed by Pure Oil Co. to draw maps for oil exploration from raw data. A new method of programing the computer facilitates the input and interpretation of information on gravity, magnetic fields, geological formations and seismic records. p. Pr Nov 196

MARIMO, GUIDO Z. See MANAGEMENT Nov 76

MARINE BIOLOGY See OCEANOGRAPHY

MARINE GEOLOGY See OCEANOGRAPHY

MARJOLIN, ROBERT See COMMON MARKET Jan 52

MARKETING

See also CLOTHING; SOAP

Great Credit Pump. Part VI Distribution Upheaval series. Carl Rieser reviews phenomenal growth of trade credit that business extends to business, due to pressure on manufacturers to finance flow of goods through distribution pipeline as middleman and retailer are undercapitalized; Describes situation in various industries, position of finance companies, captive companies in 1962; table, charts. Feb 122-124, 148-157

MARKETS See AUTOMOBILES; ITALY

MARSHES See NEW JERSEY

"MARSH SCREW" See AMPHIBIOUS VEHICLES

MARTIN, EDMUND F. See BETHLEHEM STEEL CO.

MARTIN, GLENN L., CO. See MARTIN MARIETTA CORP.

MARTIN, WILLIAM McC., JR. See BANKS & BANKING Oct 109

MARTIN MARIETTA CORP.

See also CORPORATIONS Nov 119

President George M. Bunker buys into Sperry Rand Corp.; gets board post; may be interested in acquiring Univac division, p. BM Jun 56

Millions Under Martin Marietta's Mattress. Charles J. V. Murphy analyzes new billion-dollar corporation's problem of reinvesting surplus cash resulting from sales of Sperry Rand stock and some units of American Marietta. 1961 merger of American Marietta and Glenn L. Martin Co. discussed with special focus on Martin Co.'s recovery from shaky airframe manufacturer to leading producer of rockets, space equipment; Marietta cement business. c.p. Nov 134-141, 230-242

MASERS See LASERS Jun 142

MASON, BIRNY, JR. See UNION CARBIDE CORP.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY See ENGINEERING May 180; INDIA; LASERS Jun 142; MEDICINE Sep 206

MATHEMATICS See ENGINEERING

MATHIS, JOHN H. See LONE STAR CEMENT CORP.

MATSU See CHINA, NATIONALIST

MATSUSHITA, KONOSUKE See JAPAN Jul 139

MATTEL, INC. See TOYS

MATTER See PLASMA (IONIZED)

MATTHEWS, D. R. (BILLY) See UNITED STATES—CONGRESS

MAY DEPARTMENT STORES See STORES Dec 232

MAYER, JOHN A. See BANKS & BANKING

MAYHER, LAWRENCE T. See HELLER, ROBERT, ASSOCIATES

MAYTAG, LEWIS B., JR. See AIR LINES

MAYTAG CO.

George MacK. Umbreit named chairman and chief executive officer, a result of increasing net profits during late Fred Maytag II's illness. BM Jan 39

MEANY, GEORGE See LABOR May 108; TAXATION Jan 74

MEAT See CUDAHY PACKING CO.

MEDICARE See MEDICINE

MEDICINE

That Wonderful Machine, the Brain. George A. W. Boehm reviews new integrated approach in research on brain functions and behavior reuniting physiology and psychology, overtaking simple theory of electrical circuitry; wide variety of experiments, new tools and techniques resulting in new theories. Notes shift in treatment of mental diseases; split-brain operation, diagrams. Feb 125-129, 184-192

Keeping Executives Healthy. Samuel W. Bryant reports on how Scott Paper Co., developed employee medical program for new headquarters from study of other corporate facilities, outside clinics. Director Dr. Kendall Elsom, who set up department, faced policy decisions on voluntary medical examinations, employee privacy, management relations. Drawings. Apr 122-123, 134-145

"Medicare," the Cure That Could Cause a Setback. Harold B. Meyers examines Kennedy Administration's 1963 program for old-age health insurance linked to social-security system. King-Anderson bill exceeding needs with growth of private insurance coverage (1950-70 chart), Blue Cross hospitalization, Blue Shield. Notes faults in Kerr-Mills Act and M.A.A. federal-state aid. Outlines elements of flexible plan with minimum bureaucracy and maximum use of existing non-government agencies. Outlook for legislation. May 131-133, 167-179

Aluminum adjustable stretcher, which can be loaded without first lifting the casualty, made by Halperin Co. p. Pr Jun 180

What Jet Travel Does to Your Metabolic Clock. Samuel W. Bryant reports on mental and physical disorientation caused by jet travel across time zones. As malaise becomes increasingly problematic to continent-hopping businessmen and diplomats, medical researchers probe possible means of synchronizing man's body cycles; chart, diagram. Nov 160-163, 183-186

Transistorized M.D. Lawrence Lessing reviews promising developments in new field of biomedical engineering, continuous monitoring of patient's physiological reactions in all stages of care, computer analysis of data to improve accuracy of diagnosis, surgery, hospital and nursing care; outgrowth of techniques used in open-heart surgery, space medicine. Notes leading researchers including firms, hospital centers, Bethesda Clinic of National Institutes of Health. Cost and resistance of medical profession noted, chart. c.p. Sep 130-134, 204-208

MEDNICK, SOL (PHOTOGRAPHER)

Antique Vending Machines. Portfolio of colored photographs of vending machines of late 19th and early 20th centuries. Feb 115-117

MÉKAMBO See GABON

MELLON, PAUL See BUSINESSMEN Mar 121

MELLON NATIONAL BANK & TRUST CO. See BANKS & BANKING

MELZACK, RONALD See MEDICINE Feb 186

MEMORY See BRAIN

MENTAL DISEASES See MEDICINE

MERCHANDISING

See also MARKETING; STORES

Fortune Directory annual review of 50 largest U.S. merchandising firms, 1962 rank in net sales, profits, assets, capital. table. Aug 146

MERCHANT GUILDS See ITALY

MERCHANT MARINE See SHIPPING

MERCK SHARP & DOHME INTERNATIONAL See DRUGS Dec 128

MERCURY See GYROSCOPES

MERGERS

Amerada Petroleum Corp. Chairman Alfred Jacobsen denies rumor company is selling out to group including British Petroleum and Royal Dutch/Shell. BM Jan 40

CAB's disapproval of proposed American Airlines-Eastern Air Lines merger backed by Justice Dept. T.W.A. president re-examines Pan American merger prospects in light of 1962 losses. BM Jan 40

Chesapeake & Ohio's president wins ICC approval of bid for control of ailing Baltimore & Ohio Railroad. BM Feb 58

Thompson Ramo Wooldridge: Two Wings in Space. Robert Sheehan reviews company's founding and expansion, including Thompson Products merger. Feb 94-99, 134-146

American Petrofina, S.A. acquires Cosden Petroleum Corp. of which W. R. Grace & Co. owns 52 per cent. BM Apr 52

H. J. Heinz Co. acquires Star-Kist Foods, Inc. through exchange of stock. BM Apr 52

Ralston Purina Co. negotiates preliminary agreement to merge with Van Camp Sea Food Co. BM Apr 52

Durable Threads of J. P. Stevens. Richard J. Whalen reviews success of J. P. Stevens & Co. oldest U.S. textile company, expansion including mergers of Utica-Mohawk Mills, Forstmann Woolen Co. Apr. 102-109, 170-176

Chemical Bank New York Trust Co. hopes to win FRB approval of suburban acquisition, Rockville Centre Trust Co. BM May 82

When the Crowd Goes One Way Litton Goes the Other. Carl Rieser reviews ten-year growth of Litton Industries involving 37 mergers in diverse fields. May 114-118, 220-228

Chairman Victor Muscat of B.S.F. Co. and president of Defiance Industries, Inc. is one of group taking over Lionel Corp., p. BM Jun 56

Continental Oil Co. plans to acquire assets of American Agricultural Chemical Co. through exchange of stock. BM Jun 56

Why the Rails Are Hot. Explains upsurge in rail stocks since late 1962 with favorable ICC decisions on mergers factor. PI Jun 203-206

FMC Corp. chairman to fight antitrust suit to prevent purchase of American Viscose's operating assets. BM Jul 106

Walter E. Heller & Co., factoring and financial organization, announces purchase of Vulcan-Hart Corp., Louisville kitchen-equipment manufacturer. BM Jul 106

Tennessee Gas Transmission plans to buy Heyden Newport Chemical Corp. BM July 106

Brokerage firm A. M. Kidder & Co. sells its assets to Reynolds & Co. BM July 108

U.S. court upholds CAB decision permitting Hughes Tool Co. to buy control of Northeast Airlines. BM Aug 75

Proposed merger of Chicago, Rock Island & Pacific Railroad and Union Pacific Railroad may be sidetracked by Chicago & North Western's seemingly better offer. BM Aug 75

Unfinished Job at W. R. Grace. Carl Rieser reviews transformation of family trading and shipping empire under President Peter Grace since 1945, entry and rapid expansion in chemicals through mergers Aug 108-113, 228-232

It's No Longer Just Grind, Grind at Norton. Reports Norton Co., merger with National Research Corp. to diversify product development. Aug 118-123, 164-170

Tung-Sol Electric Inc. merger negotiations with Purolator Products Inc. break down. BM Sep 60

Abbott Laboratories and G. D. Searle & Co. negotiate merger. Companies await stockholders' approval. BM Sep 64

Kress Foundation rejects Genesco Inc. offer to buy S. H. Kress & Co. stock above the market. BM Sep 64

Plan for Socony Mobil Oil Co. to buy Virginia-Carolina through exchange of stock announced. BM Sep 64

ICC approval of pending Pennsylvania-New York Central merger and separate plan for combined operation of Wabash, N. & W., and Nickel Plate awaited. BM Sep 66

Francis I. du Pont & Co. merges with A. C. Allyn & Co.; becomes second-largest U.S. brokerage firm. BM Oct 56

Goodyear Tire & Rubber Co. announces pending purchase of Motor Wheel Corp. through exchange of stock. BM Oct 60

What's Rocking Those Rocks, the Banks. Robert Sheehan reviews ferment in commercial bank to liberalize conflicting federal and state regulations hampering growth gers. Oct 108-113, 242-246

Who's To Blame for lis-Riklis? Stanley H. Brown reviews setbacks of Meshulam Riklis as board chairman of Rapid-American Corp. and McCrory Corp. running business empire assembled through leverage buying small undervalued company and using assets to buy bigger one, involving huge debt due to failure to realize projected earnings. Series of complex transactions to assure creditors include liquidation of money-losing divisions. Oct 136-137, 236-240

Need for a Hot Line. Editorial points out huge cash and marketable securities of U.S. corporations being reinvested in weird mergers in unfamiliar fields due largely to tax system. Nov 119-120

Millions Under Martin Marietta's Mattress. Charles J. V. Murphy analyzes company's problem of surplus cash resulting from sales of Sperry Rand stock after collapse of joint venture and disposal of numerous American Marietta Co. units after merger. Company faces issue of reinvesting in another large corporation extending diversification. Nov 134-141, 230-242

Crocker-Anglo Bank merges with Los Angeles Citizens National Bank. BM Dec 66

Garrett Corp. (aerospace gear) and Signal Oil & Gas Co. agree to merge. BM Dec 66

T.W.A. and Pan American World Airways call off merger due to unresolved series of suits and CAB's decision to postpone hearings. BM Dec 66

Genesco Inc. acquires control of S. H. Kress & Co. BM Dec 70

Interpublic Inc. acquires David B. Williams Co.; becomes world's biggest advertising organization. BM Dec 72

United Aircraft: Success with a Wry Twist. Harold M. Meyers reviews company's rise as No. 1 producer of jet engines and transition in aerospace technologies past fifteen years, including mergers. Dec 110-115, 210-216

Crisis in Antitrust. Robert H. Bork and Ward S. Bowman analyze defects in antitrust policy, citing cases including vertical merger. Dec 138-140, 192-201

It's a Spryer Singer. Edmund K. Faltermayer reviews Singer Co.'s rehabilitation since 1958, broad diversification program, numerous corporate acquisitions. Dec 144-148, 154-168

MERO, JOHN See OCEANOGRAPHY Dec 218

MERRILL LYNCH, PIERCE, FENNER & SMITH
See also TRANSITRON ELECTRONIC CORP. Mar 191

Chairman Michael W. McCarthy of biggest U.S. brokerage firm indicates company would like to go public, requiring change in New York Stock Exchange rules. p. BM Oct 56

METABOLISM See MEDICINE Nov 160

METALS
See also IRON; MINES & MINING; NORTON CO.; STEEL

Pressure Technology Corp. of America introduces fluid extrusion of metal for wide variety of products, p. Pr Feb 160

High-speed electromagnetic pump to move alkali metals at high temperatures developed for use with nuclear reactors by Atomics International division of North American Aviation, Inc., p. Pr Jun 174

Plasma jet radiation directed through quartz lens in continuous beam of metal-cutting white light, developed by Westinghouse Research Laboratory. p. Pr July 215

Rust protection for inexpensive metal products economically feasible with a paper covering on which rust-inhibiting chemicals are spread in polka-dot pattern. Chemicals vaporize and form protective film. Paper made by Cromwell Paper Co. p. Pr Oct 192

Du Pont develops explosive-bonding technique and plans to make plate clad by the process. New holemaker using tungsten electrode shielded by argon gas to melt metal, and then releasing carbon dioxide with pressure to blow away the molten metal made by Hobart Brothers Co. p. Dec 190

METRICS DIVISION See SINGER CO.

METRO-GOLDWYN-MAYER, INC.

Robert H. O'Brien new president and chief executive officer succeeds Joseph Vogal who becomes chairman. p. BM Feb 54

METTLER, RUBEN F. See THOMPSON RAMO WOOLDRIDGE INC. Feb 140

MEXICO
See also LATIN AMERICA; MINES & MINING

Pemex at Twenty-Five. Government oil monopoly marks anniversary as largest integrated oil and gas producer in Latin America, also largest dispenser of social services outside of federal government. Operation of six up-to-date refineries, big oil reserves, and joint ventures with U.S. companies noted. BG Aug 87-88

MEYERS, HAROLD B. (AUTHOR)

"Medicare," the Cure That Could Cause a Setback. Examines Kennedy Administration's 1963 program for old-age health insurance linked to social-security system. May 131-133, 167-179

Root of the FTC's Confusion. Examines Federal Trade Commission's defects, extra broad discretionary power, lack of consistent policy in recent cases on discriminatory, deceptive and monopolistic practices. Reform innovations. Aug 114-116, 152-158

Hell of a Different Way to Run a Railroad. Reports on President D. W. Brosnan's drive to update Southern Railway, rapid introduction of new technology, centralization and automation. Sep 100-102, 210-227

United Aircraft: Success with a Wry Twist. Reviews company's rise as No. 1 producer of jet engines and transition in aerospace technologies during past fifteen years, expansion and acquisitions. Dec 110-115, 210-216

MF-295 (ENGINE) See AIRCRAFT INDUSTRY

M-G-M See METRO-GOLDWYN-MAYER, INC.

MHD GENERATORS See PLASMA (IONIZED) Aug 227

MICHIGAN STATE UNIVERSITY See COLLEGES & UNIVERSITIES May 180

MIDDLE EAST See LEBANON

MIDDLETON, BAKER See SCOTT PAPER CO. Apr 123

MILAN See ITALY

MILITARY ASSISTANCE ADVISORY GROUP See CHINA, NATIONALIST Jul 153

MILK, EVAPORATED See ANTITRUST Aug 116

MILLER, ARJAY See FORD MOTOR CO.

MILLING MACHINES

Automatic tape punch on a numerically controlled milling machine, made by Moog Servocontrols, Inc., enables machinist to cut his own tape by dialing in the data when he first makes a part. p. Pr Jun 174

MILNER, PETER See MEDICINE Feb 191

MINERALS See MINES & MINING; OCEANOGRAPHY

MINES & MINING
See also COAL

Big New Kicker at Asarco. John McDonald reports American Smelting & Refining Co.'s improved prospects as result of big shift into copper mining and ending 1952-62 decline due to drop in lead, zinc markets, Mexican mine problems. New mines in Arizona, Toquepala in Peru, Mount Isa in Australia, custom smelter operations, and Quebec asbestos project noted. c.p. Jan 77-83, 132-143

Texas Gulf Sulphur Co., world's leading supplier of sulfur, to become one of major producers of muriate of potash when mine at Moab, Utah with highly-automated warehouses and loading facilities goes into production. Diversifies into other minerals including phosphates. p. Pr Sep 173

Jungle Mesabi. Mékambo iron-ore deposit consisting of three mountains in remote part of Gabon is major find of vast mineral wealth along Africa's South Atlantic Coast according to Paul Deutchman's report of recent tour. French Government promoted consortium to develop mine organized by Bethlehem Steel. New Gabon Government grants mining concession. Work under way. Financing question. map. BG Dec 81-84

MINING TRUST LTD. See MINES & MINING Jan 80

MINNESOTA MINING & MANUFACTURING CO.

New President and chief executive Bert Cross, a relentless perfectionist dedicated to the company, faces challenge to maintain recent diversification record and profits growth; succeeds Herbert Buetow, retired, now chairman of finance committee. William L. McKnight remains chairman of the board. p. BM Jul 101

MINOW, NEWTON See TELEVISION

MINUTEMAN (MISSILE) See MISSILES & ROCKETS

MIRRORS, BERYLLIUM See OPTICS

MISSILES & ROCKETS
See also MARTIN MARIETTA CO.; SPACE

Experimental directional rocket for satellites, using solid fuel that may be turned to gas by turning valve, made by Rocket Research Corp. p. Pr Jan 145

Thompson Ramo Wooldridge: Two Wings in Space. Robert Sheehan reviews company's rapid expansion in space technology, including Air Force "Western Development Division" ICBM missile development program, Minuteman B. Feb 94-99, 134-146

World's largest spin forge to cold-form steel, titanium, and alloys for rocket motor cases and missiles, built and operated by Lear Siegler, Inc. p. Pr Mar 159

Closed-circuit TV system aids riveting skirt assemblies to Titan missiles, cutting processing time at Martin Marietta. p. Pr Mar 159

Missile reliability testing including Minuteman B discussed in **"Reliability" Engineering.** Apr 127

Experimental rocket chamber for a solid-fuel rocket, built by Sun Shipbuilding & Dry Dock for Aerojet-General Corp., to demonstrate that it is practical to fabricate huge casings to precise specifications. p. Pr Apr 159

Potential use of laser as incendiary beam, anti-missile weapon discussed in **Laser's Dazzling Future** Jun 166

Minuteman's New Home on the Montana Range. Portfolio of colored photographs and notes on solid-fueled Minuteman missile, first of second-generation ICBM's armed with thermonuclear warhead, deployed in underground launching silos on Montana prairies. Strict surveillance procedure, electronic controls discussed. 341st Strategic Missile Wing is first of five by 1965, made up of new type of volunteer, handpicked command crew and missile men. Aug 124-130

Domes for large booster tanks being molded by explosion-forming instead of being welded in segments at Martin Co. Polaris motor casing made of glass epoxy and rubber are inspected by boom-mounted instrument package made by Magnaflux Corp. for Aerojet General. p. Pr Oct 187

MISSOURI RIVER See RIVERS; RURAL ELECTRIFICATION ADMINISTRATION

M.I.T. See ENGINEERING May 180; INDIA; LASERS Jun 142; MEDICINE Sep 206

MITARAI, TAKESHI See JAPAN July 139

MITCHELL, GEORGE See CREDIT Jun 113, Oct 40

MITCHELL, WILLIAM L. See GENERAL MOTORS CORP. Jun 110

MITI See JAPAN Jul 274

MITSUBISHI BANK See JAPAN Jul 136

MITSUI BANK See JAPAN Jul 137

MIXING MACHINES

Portable petrochemical mixer for tank cars, powered with an air motor, made by General American Transportation Co. p. Pr May 186

Front-end-discharge concrete mixer with 12-cubic-yard agitator capacity, front-end drive, and completely controlled from cab, built by Travel Batcher Corp. p. Pr Aug 176

MODEL T (AUTOMOBILE) See AUTOMOBILES

MOHOLE PROJECT

How NSF Got Lost in Mohole. Herbert Solow reviews dragging delay and mounting expenses in experiment to probe earth's mantle beneath the crust, underseas deep drilling to study mantle, undertaken by National Science Foundation and AMSOC. Criticizes contract award to Brown & Root, Inc. House investigates. Key scientists. Cuss I test ship Phase I off Lower California. p. May 138-141, 198-209

MOLDING See MISSILES & ROCKETS; STEEL

MONAGHAN, PHILIP G. See GENERAL MOTORS CORP. Jun 111

MONEY

See also CREDIT; FOREIGN EXCHANGE; INTERNATIONAL MONETARY FUND

Skeleton That Didn't Rattle. Michael A. Heilperin reflects on recent inconclusive annual meeting of International Monetary Fund. Notes failure to touch on dollar problem, inquiry on liquidity prompted by concern over possibility of U.S. ending balance-of-payments deficit. Endorses European bankers' warning against excessive liquidity. Also notes experts disapprove present gold standard. Dec 104

MONITORING SYSTEM, PHYSIOLOGICAL See MEDICINE

MONROE CALCULATING MACHINE CO. See LITTON INDUSTRIES

MONSANTO CHEMICAL CO.

See also SOAP

Charles A. Thomas chief executive of one of U.S. companies exceeding $1 billion sales in 1962. p. BM Apr 58

MONTANA See MISSILES & ROCKETS

MONTECATINI See CHEMICALS Nov 223

MOON

See also SPACE

Mapping the Face of the Moon. Portfolio of maps, photographs with short report on preliminary geological and topographical maps of giant map-making project of U.S. Air Force's Aeronautical Chart and Information Center and Geological Survey for NASA. To map entire surface of moon in detail. Nov 130-133

MOORING LINES See ROPE

MORAN, ALFRED J. See KALVAR CORP.

MORAN'S, THOMAS J., SONS See KALVAR CORP. Mar 112

MORGAN, J. P., & CO. See GENERAL MOTORS CORP.

MORGAN GUARANTY TRUST CO. See BANKS & BANKING Oct 242

MORGENSTERN, OSKAR (AUTHOR)

How to Plan to Beat Hell. Suggestions for foolproof U.S. command-control system to meet problem of probable accidental nuclear explosion due to spread of weapons throughout world. Jan 103, 200-208

Random Walk in Wall Street. Princeton University study with Clive W. J. Granger, testing merits of stock indexes and employing highly-sophisticated technique of spectral analysis, supports random-walk hypothesis of short-term unpredictable price fluctuations. PI Feb 204

"Qui Numerare Incipit Errare Incipit". Analyzes inaccuracies in economic statistical data, margins of error and deliberately false figures released by government agencies and others, invalidating economics as a true science. Article a condensation of forthcoming book *On the Accuracy of Economic Observations.* Oct 142-144, 173-180

MORGENTHAU, HANS See UNITED STATES—FOREIGN RELATIONS

MORRELL, FRANK See MEDICINE Feb 192

MORROW, DWIGHT See GENERAL MOTORS CORP. Sep 198

MORTGAGES

Increase on houses due to easy credit. BR Mar 44

Future mortgage commitments increase significantly over 1962. BR Apr 44

Rise in interest rate and long-term mortgages leading to steady increase in foreclosures since 1952; discussed in **Where's the Ceiling on New Houses?** Jun 132

FHA and VA mortgaging on old homes rises sharply. Shift to conventional mortgages indicated in FORTUNE survey of builders. BR Oct 44, 46

MORUZZI, GIUSEPPE See MEDICINE Feb 191

MOSES, ALFRED H. See LOEB, CARL M., RHOADES & CO. Apr 131

MOSHER, SAMUEL B. See SIGNAL OIL & GAS CO.

MOSLER SAFE CO.

Where They Keep the Money. Portfolio of colored photographs illustrates how bank vaults are made at biggest firm in flourishing industry. Oct 114-117

MOTELS See HOTELS

MOTOR WHEEL CORP. See GOODYEAR TIRE & RUBBER CO.

MOTTAR, ROBERT M. See PHOTOGRAPHY

MOUNT HOLYOKE COLLEGE See COLLEGES & UNIVERSITIES May 148

MOUNT ISA MINES LTD. See MINES & MINING Jan 80

MOVIES

Speculating on Spectaculars. How to evaluate speculative motion-picture-company stocks, special problems involved in estimating realistic book value, profitability of films from theatrical reruns and television leases, value of studio property, theatres, office buildings, amortization tables. Series of epic, big-budget, heavily ballyhooed films in 1963 revives market. PI May 232-236

Cleopatra's Prospects. Assesses Twentieth Century-Fox's potential profits on new motion picture *Cleopatra* starring Elizabeth Taylor, most costly and publicized film. Company's optimistic estimate of breakeven point doubted by motion-picture men. Schedules string of new films over the near future at total cost of $50 million. PI May 234

MUELLER, GEORGE E. See NASA

MUELLER, LOUIS H. See CONTINENTAL AIRLINES Feb 194

MUNICIPAL DEVELOPMENT & LOAN BOARD See CANADA

MUNK, WALTER See MOHOLE PROJECT May 139

MUNROE, JOE See PHOTOGRAPHY

MURCHISON, CLINT AND JOHN See ALLEGHANY CORP.

MURPHY, CHARLES J. V. (AUTHOR)

Foreign Aid: Billions in Search of a Good Reason. Reviews new criticisms of U.S. foreign-aid program led by three top bankers who charge that bilateralism provokes race for markets and political advantage, call for new multinational approach. Mar 126-130, 205-212

New Communist Patterns in Latin America. Assesses changes in party tactics during past five years, political consequences of Fidel Castro, three distinct patterns in Brazil, Mexico, Venezuela; considerations for U.S. policy making. Oct 102-107, 150-168

Millions Under Martin Marietta's Mattress. Analyzes corporation's problem of surplus cash resulting from sales of Sperry Rand stock and units of American Marietta; discusses 1961 merger of American Marietta and Glenn L. Martin Co. with special focus on Martin Co.'s recovery. Nov 134-141, 230-242

MUSCAT, VICTOR

Victor Muscat and friends make play for American Hardware Co. Court rejects mismanagement charges. p. BM Feb 58

Chairman of B.S.F. Co. and President of Defiance Industries, Inc. is one of group taking over Lionel Corp., also tried unsuccessfully to buy control of Rapid-American Corp. p. BM Jun 56

MUTO, ITOJI See JAPAN Jul 140

MUTUAL FUNDS See INVESTMENT TRUSTS

MYERS, CHARLES F. See BURLINGTON INDUSTRIES, INC.

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N.A.A.C.P. See NEGROES Sep 98

NALCON (TRADENAME) See PLASTICS

NASA

D. Brainerd Holmes head of Office of Manned Space Flight quits job after months of feuding with Administrator James E. Webb. George E. Mueller replaces Holmes. p. BM Sep 60

Now It's an Agonizing Reappraisal of the Moon Race. Richard A. Smith reviewing growing doubts about U.S. space program, especially Apollo moon project under President Kennedy's change-of-pace proddings, foresees drastic realignment over next two years; discusses cuts in NASA budget, George Mueller new Office of Manned Space Flight head, ill effects of having overly independent men in key development centers. c.p. Nov 124-129, 268-280

Mapping the Face of the Moon. Portfolio of maps, and photographs with short report on preliminary geological and topographical maps of giant project to map entire surface of moon in detail undertaken by Air Force's Aeronautical Chart and Information Center and U.S. Geological Survey. Nov 130-133

NASH, CHARLES W. See GENERAL MOTORS CORP. Sep 138

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION See NASA

NATIONAL AIRLINES See AIR LINES

NATIONAL CAN CORP.

Executive Vice President Robert Stuart promoted president. Robert S. Solinsky remains chairman and chief executive. p. BM Dec 70

NATIONAL CAR RENTAL SYSTEM, INC. See LEASES & RENTALS Oct 119

NATIONAL ESTATE See LAND

NATIONAL HEALTH SERVICES (EUROPE) See EUROPE Dec 125

NATIONAL INSTITUTES OF HEALTH See MEDICINE

NATIONALISM See LAW

NATIONAL LABOR RELATIONS BOARD

NLRB's New, Rough Line. M. R. Lefkoe examines new Kennedy-majority's use of vast discretionary power in broad interpretation of labor laws infringing rights of management, recent critical cases over picketing, secondary boycotts, free speech on the part of employers. Widespread criticism of businessmen, legal profession, and Congressmen. Points up need for far-reaching reform. Endorses Representative Landrum's proposal to turn over judicial authority to courts, drawings. Nov 164-166, 172-178

NATIONAL LIBERATION FRONT See VENEZUELA

NATIONAL PARK SERVICE See CONSERVATION Mar 114

NATIONAL QUOTATION BUREAU See STOCK MARKET

NATIONAL RESEARCH CORP. See NORTON CO.

NATIONAL RURAL ELECTRIC COOPERATIVE ASSOCIATION See RURAL ELECTRIFICATION ADMINISTRATION Feb 121

NATIONAL SCIENCE FOUNDATION

See also ASTRONOMY

How NSF Got Lost in Mohole. Herbert Solow reviews dragging delay and mounting expenses in Project Mohole experiment to probe earth's mantle beneath the crust. Contract award to Brown & Root, Inc. criticized. Key scientists, including Dr. Waterman director and successor-designate Dr. Haworth, noted. p. May 138-141, 198-209

NATIONAL UNIVERSITY OF MEXICO See COLLEGES & UNIVERSITIES

NATIONWIDE CORP. See ALLEGHANY CORP.

NATURE See CONSERVATION

NAVIGATION SYSTEMS, AIR See AIRCRAFT INDUSTRY

NAVY See CONTRACTS, GOVERNMENT; CHINA, NATIONALIST Jul 152

NEEDLES PROJECT See SPACE

NEGROES

See also LABOR May 239

Two Concepts of Law. Editorial points up need for strengthening the rule of law as debate opens in Washington over constitutionality of Title II of Administration's Civil Rights Act and lawyers from all over the world convene in Athens for World Peace Through Law Conference. Aug 91-92

Businessman and the Negro. Charles E. Silberman analyzes new direction of Negro's struggle for bettering himself with key issues job equality and opportunity; surveys currents of change, corporate employment practices. President's Committee on Equal Employment Opportunities Plans for Progress program noted. Decline in Negro's economic position over past decade and bleak future with widening gap between education and job requirements discussed. New book *Crisis in Black and White* is source of article. Sep 96-99, 184-194

Voice from the Dark Ages. Short editorial criticizes U.S. Steel Corp.'s use of "economic power" to enforce better race relations in Birmingham as beyond the scope of corporate activity. Rejection of proposal to deal with banks and suppliers favoring Negro advancement, and New York *Times* editorial on narrow concept of influence noted. Dec 102

NEHRU, JAWAHARLAL See INDIA Jun 118

NELSON, SIR HENRY G. See ELECTRICAL EQUIPMENT Sep 113

NERVES See MEDICINE

NEUBERGER, ROY See STOCK MARKET

NEUMILLER, LOUIS See CATERPILLAR TRACTOR CO. Jul 167

NEURONS See MEDICINE

NEW ENGLAND

Connecticut Valley, Where American Industry Began. Portfolio of drawings by Paul Hogarth depicts cradle of industrial revolution, early factories still in operation in Vermont, Massachusetts, and Connecticut. Mass production, Yankee inventiveness discussed. Dec 116-123

NEW FRONTIER See UNITED STATES—ECONOMY

NEW JERSEY

Western Gateway to New York. Portfolio of pen-and-pencil sketches by Jack Zajac, commissioned by FORTUNE, and photographs by Charles Pratt shows Jersey Meadows, ugly industrial bog somber and chaotic gateway to New York; assorted plants and refineries, looping highways, Jersey Turnpike, converging railroad lines. Value of underdeveloped land and reclamation problem noted. May 122-130

NEWMONT MINING CORP. See CEMENT

NEWPORT NEWS SHIPBUILDING & DRY DOCK CO. See OCEANOGRAPHY Dec 218

NEWS See PRESS

NEWSPRINT See PAPER

NEW YORK

Eruption of Cement on the Hudson. Portfolio of colored photographs and notes on giant new plant of Atlantic Cement Co. along the Hudson River near Albany. Jun 126-127

NEW YORK (CITY)

See also BUILDING

Future of the Office Building Boom. Daniel Seligman appraises postwar nationwide office-building boom, strength of market discounting current misgivings; focus on New York world's leading office center, midtown and downtown, new zoning law. Mar 84-88, 214-223

Vanishing Glory in Business Buildings. Portfolio of drawings by Nicholas Solovioff with notes on old classic Roman-style buildings built between 1890 and 1928, monuments of commerce and industry to be torn down and replaced by modern faceless fronts. Sep 119-126

NEW YORK CENTRAL RAILROAD See RAILROADS Oct 231

NEW YORK CHAMBER OF COMMERCE See ARCHITECTURE Sep 126

NEW YORK CLEARING HOUSE See ARCHITECTURE Sep 119

NEW YORK COFFEE & SUGAR EXCHANGE See COMMODITIES Aug 209

NEW YORK HILTON HOTEL See HOTELS

NEW YORK STOCK EXCHANGE See STOCK MARKET

NEW YORK TIMES (NEWSPAPER) See NEGROES

NICHOLS, THOMAS S. See OLIN MATHIESON CHEMICAL CORP.

NICKERSON, ALBERT L. See SOCONY MOBIL OIL CO.

NIESET, ROBERT See KALVAR CORP. Mar 113

NLRB See NATIONAL LABOR RELATIONS BOARD

NORDEN DIVISION See UNITED AIRCRAFT CORP.

NORDHOFF, HEINZ See BUSINESSMEN—EUROPE Aug 99

NORFOLK & WESTERN RAILWAY See RAILROADS

NORSTAD, LAURIS

Retires from military service, including NATO command, and becomes president of Owens-Corning Fiberglas Corp. international division. p. BM May 52

NORTH AMERICAN AVIATION INC. See NUCLEAR POWER Jul 174

NORTHEAST AIRLINES See AIR LINES

NORTON CO.

It's No Longer Just Grind, Grind at Norton. Reports merger of world's largest manufacturer of abrasives with National Research Corp. to diversify product development in metallurgy, high-vacuum and temperature technologies. Company produces full line of grinding wheels, coated abrasives, machine tools; adds Rokide ceramic coating for space vehicles and Alundum new abrasive. Foreign expansion, and prudent management of Chairman Milton Higgins II grandson of founder of moneymaking old New England firm noted. c.p. Aug 118-123, 164-170

NORTON-TAYLOR, DUNCAN (AUTHOR)

Sword at the Belly of Red China. Reviews phenomenal economic and military development of Nationalist China on Taiwan. Jul 150-153, 280-284

NOYES, ELIOT

Industrial Designer with a Conspicuous Conscience. Walter McQuade reviews Noyes' success as industrial designer, architect, corporate consultant. An exponent of good taste, "clean" machine design, Noyes disdains product stylist's "packaging job" and market orientation of consumer-preference surveys. Noyes' work at Westinghouse and I.B.M. discussed; other industrial clients noted. Aug 135-138, 183-190

NOZZLES (ROCKET) See MISSILES & ROCKETS; SPACE

N.R.E.C.A. See RURAL ELECTRIFICATION ADMINISTRATION

NSF See NATIONAL SCIENCE FOUNDATION

NTSC See TELEVISION

NUCLEAR FUELS See NUCLEAR POWER

NUCLEAR GYROSCOPES See GYROSCOPES

NUCLEAR POWER

Electron diffraction camera photographs structural materials in reactor field at Westinghouse Research Laboratories; possible uses cited. p. Pr May 185

High-speed electromagnetic pump to move alkali metals at high temperatures developed for use with nuclear reactors by Atomics International division of North American Aviation, Inc. p. Pr Jun 174

Growing Market for Nuclear KW. Reviews progress in commercial nuclear electric power, public utility plants in operation and construction projects (map, table.) Development of nuclear reactor manufacturing industry, and search for economical fuels with fast breeder reactor most promising over burner-converter (diagrams), and spectral shift, gas and sodium coolants more exotic. AEC budget, incentives program, and forecast on 1970-80 capacity also noted. c.p. Jul 172-176, 252-259

Big One for Free Enterprise. Editorial endorses AEC plan before Congress for civilian sale of fissionable reactor fuel amending present law limiting ownership to government; move is logical follow-up to steps already taken to encourage competitive use of atomic resources. Sep 92

NUCLEAR REACTORS See NUCLEAR POWER

NUCLEAR WEAPONS

How to Plan to Beat Hell. Oskar Morgenstern suggests foolproof U.S. command-control system to meet problem of probable accidental nuclear explosion including safe and reliable nuclear weapon construction, invulnerable communications to supreme authority, President. Project Needles space belt of fine needles is effective measure. Jan 103, 200-208

Minuteman's New Home on the Montana Range. Portfolio of colored photographs and notes on U.S.'s key nuclear deterrent weapon: solid-fueled Minuteman missile, first of second-generation ICBM's armed with thermonuclear warhead deployed in underground launching silos in Montana prairies. Strict surveillance procedure, electronic controls discussed. 341st Strategic Missile Wing is first of five by 1965, made up of new type of volunteer, handpicked missile men and command crew. Aug 124-130

NUÑEZ, JULIO E. (AUTHOR)

Importance of Latin America's Elite. Deltec Panamerica Director (sketch) urges reappraisal of U.S. policy toward underdeveloped nations, especially those in Latin America; points out fallacy of overstressing economic aid to deter Communist appeal, and cites decline in Western leadership elite as underlying cause for upheaval. Advises U.S. to aid in rejuvenating Latin America's elite, encouraging reforms within private enterprise framework. Jan 70, 210

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OAKES, CHARLES E. See ELECTRIC POWER

O'BRIEN, CONOR C. RUISE See CONGO Feb 214

O'BRIEN, ROBERT H. See METRO-GOLDWYN-MAYER, INC.

OBSERVATORY, KITT PEAK NATIONAL See ASTRONOMY

OCEANOGRAPHY

See also LITTON INDUSTRIES May 220

Deep-sea current sensor to measure velocity and direction of ocean currents made by General Dynamics/Electronics under test. p. Pr Jan 150

How NSF Got Lost in Mohole. Herbert Solow reviews dragging delay and mounting expenses of Project Mohole experiment of National Science Foundation and AMSOC to probe beneath earth's crust and analyze mantle from oceanographic, geophysical and paleontological points of view; criticizes contract award to Brown & Root, Inc. over wide field of bidders in light of their poor performance. House investigates. Key scientists identified. p. May 138-141, 198-209

Underwater house for use on bottom of Red Sea devised by Commandant Yves Cousteau to help determine feasibility of submerged living to harvest submarine foodstuffs. p. Pr Jul 226

Inexhaustible Riches from the Sea. George A. W. Boehm discusses surge of scientific interest in oceanographic research, storehouse of new wealth in minerals and cheap food; Kennedy Administration 10-year government coordinated program; rising commercial interest. Dredging of ore nodules on ocean floor, "aquaculture" new technique of managing marine resources, breeding and pasturing of fish noted. c.p. Dec 132-137, 218-229

Far Cry from Izaak Walton. Colored drawing and notes on new wide variety of automated gear for herding and catching fish opening the way to the exploitation of new resources. Dec 134-35

OCEAN SCIENCE & ENGINEERING, INC. See OCEANOGRAPHY May 204

ODD-LOT MARKET See STOCK MARKET

OFFICE BUILDINGS

See also BUILDING Mar 89

Future of the Office Building Boom. Daniel Seligman appraises postwar nationwide office-building boom; focus on New York as world's leading office center, space demand, new zoning law, speculative and "monument" builders. Notes city-by-city boomlets outside New York and unique local situations, overbuilding. Mar 84-88, 214-223

Vanishing Glory in Business Buildings. Portfolio of drawings by Nicholas Solovioff with notes on examples of classic Roman-style monuments of commerce and industry built between 1890 and 1928 in New York City. Sep 119-126

Uris Buildings Corp. leases newest Manhattan building to J. C. Penney & Co., largest multi-tenant building lease ever signed in New York. BM Oct 56

OFFICE OF MANNED SPACE FLIGHT See NASA

OFFICES See BUILDING

OFFICE WORKERS See LABOR May 239

OFFSET PRESSES See PRINTING PRESSES

OIL

See also CAPITAL INVESTMENTS Dec 54; EUROPE; PANAMA Jun 70

How Rathbone Runs Jersey Standard. Walter Guzzardi Jr. gives closeup account of how president and chief executive of world's largest oil company presides over daily affairs. Imperturbable style, careful handling of variety of issues at executive committee meetings, conferences, management reorganization noted. Jan 84-89, 171-179

Watching 2,600 Miles of Pipeline Grow. Portfolio of drawings by Paul Hogarth, on special FORTUNE commission, and short report on complex construction of new $350 million Colonial oil pipeline from Houston to New York, joint project of nine oil companies. Houston-Greensboro, N.C. section to go into operation in 1963. Feb 100-109

American Petrolfina, S.A. President Harry Jackson announces proposed acquisition of Cosden Petroleum Corp. in which W. R. Grace & Co. owns 52 percent. p. BM Apr 52

Depletion: What's at Stake for Thirty Companies. FORTUNE estimate of oil depletion allowances of 30 largest U.S. oil companies, total and per common share, based on estimated production revenues, net sales percentages (table). Calculation derived from net crude oil and gas production multiplied by posted prices. PI Apr 206

Leonard F. McCollum president Continental Oil Co. plans to acquire assets of American Agricultural Chemical Co. in exchange of stock. p. BM Jun 56

Strange Case of Sun Oil. M. R. Lefkoe reviews six-year-old FTC case involving discriminatory discount to franchised dealer to meet independent Super Test station's price war. Supreme Court decision upholds FTC against lower court's ruling for Sun Oil. Ambiguous alternative courses of action proposed as guideposts for oil industry. Aug 117, 158, 163

Esso Research Ltd. develops oil-spraying technique to stabilize shifting sand to permit growth of windbreak trees and other ground cover. Potential value in reclaiming marginal desert areas. p. Pr Sep 180

Sinclair's President Edward L. Steiniger and Gordon W. Reed chairman of Texas Gulf Producing Co. announce agreement on Sinclair purchase of Texas Gulf's domestic and foreign oil and gas properties including reserves in Libya. Sinclair also buys most of Western Natural Gas Co. properties. Both acquisitions to relieve company's crude-oil deficit. p. BM Oct 60

Carl Reistle Jr. succeeds Morgan Davis as chairman and chief executive of Humble Oil & Refining Co. p. BM Dec 70

Argentina

Loeb, Rhoades deal involving Cuban Sugar, Cities Service reviewed in **Wherever You Look, There's Loeb, Rhoades.** Apr 152

Indonesia

"A Complete Draw". Reviews agreement signed in Tokyo between three big western oil companies: Caltex Pacific, Stanvac Indonesia, Shell Indonesia, and government of Indonesia. Feat of economic diplomacy achieved by President Kennedy's special envoy Wilson Wyatt mediating deadlock on critical issues, enabling companies to reach settlement before deadline imposed by Indonesia's President Sukarno. Terms for continuing oil operations include profits split favoring Indonesia. Other key figures in bargaining noted. p. BG Aug 79-87

Mexico

Pemex at Twenty-Five. Government oil monopoly marks anniversary as largest integrated oil and gas producer in Latin America, also largest dispenser of social services outside of federal government. Operation of six up-to-date refineries, big oil reserves, and joint ventures with U.S. companies noted. BG Aug 87-88

OIL EQUIPMENT

Vanadium analyzer to detect changes in vanadium content of crude-oil samples, made by Varian Associates on license from Gulf Oil. Diving robot with two propellers, television camera, sonar, and remote-control arm to turn screws, valves, developed by Shell Oil Co. p. Pr Jan 155

Bow mooring and loading structure with 360-degree swing designed by G. A. McGammon serves supertankers at Esso Standard Libya terminal, p. Oil-rig transporter with four four-wheeled dollies on each corner of the rig, enabling relocation of rig in three sections, made by Mid-Continent Supply Co. p. Pr May 186

World's heaviest cracking tower installed at Standard Oil (Kentucky) refinery by four gin poles in 45 minutes. Unit built by Fluor Corp. p. Pr Jun 171

Transistorized warning device to protect offshore-oil rigs in shipping lanes in the Gulf of Mexico in foggy weather made by Tideland Specialty Co., Inc. p. Pr Jul 226

Unique oil-exploration tool, called Dinoseis, which measures rock strata to granite level, designed by Sinclair Research, Inc. p. Pr Oct 188

Commap automated map-making system developed by Pure Oil Co. to draw maps for oil exploration from raw data. A new method of programming the computer facilitates the input and interpretation of information on gravity, magnetic fields, geological formations and seismic records. p. Pr Nov 196

OLD AGE See MEDICINE

OLDS, JAMES See MEDICINE Feb 191

OLDSMOBILE DIVISION See GENERAL MOTORS CORP.

OLIN, JOHN M. See OLIN MATHIESON CHEMICAL CORP.

OLIN MATHIESON CHEMICAL CORP.

N. Narvey Collisson named president and chief executive succeeding Stanley de J. Osborne who becomes board chairman. Thomas S. Nichols succeeds John Olin as chairman of the executive committee. Olin remains director and member of principal committees. p. BM Sep 60

OPEL, ADAM, A. G. See AUTOMOBILES—EUROPE

OPERATING ENGINEERS, INTERNATIONAL UNION OF See LABOR Nov 172

OPPENHEIMER FUND See STOCK MARKET Apr 212

OPTICS

See also LASERS Feb 160, Jun 156

Silk stocking to absorb outsized abrasive particles used in new polishing process developed by Precision Lapping Co. for beryllium mirrors used in optical systems. p. Pr Feb 162

Plasma jet radiation directed through quartz lens in continuous beam of metal-cutting white light developed by Westinghouse Research Laboratory. p. Pr Jul 215

ORANGE COUNTY (CALIFORNIA) See CALIFORNIA Nov 142

ORELL, BERNARD L. See BUSINESSMEN Mar 120

OR SAN MICHELE, CHURCH OF See ITALY

OSBORNE, STANLEY de J. See OLIN MATHIESON CHEMICAL CORP.

OSBORNE, W. IRVING, JR. See PULLMAN INC.

OSTI, GIAN LUPO See ART Oct 139

OUTDOOR RECREATION RESOURCES REVIEW COMMISSION See CONSERVATION Mar 114

OUTERWEAR INDUSTRY See CLOTHING

OVER-THE-COUNTER MARKET See STOCK MARKET

OWENS CORNING FIBERGLAS CORP.
General Lauris Norstad becomes president of international division. p. BR Mar 52

OY TAMPELLA AB See TAMPELLA OY-AB

OZALID DIVISION See GENERAL ANILINE & FILM CORP.

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PACH, S. WARNER See GILLETTE Co. Jul 248

PACIFIC ELECTRIC WIRE & CABLE CO. See CHINA, NATIONALIST Jul 282

PACIFIC GAS & ELECTRIC CO.
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Bagging machine with attachments for variety of products designed for small manufacturer by Bag Packaging Machinery Co. p. Pr Feb 169
Strippable coating of chemical foam to protect auto parts made by M. & T. Chemicals, Inc. Aluminum carton sizer to cut down cartons to fit special-size shipments made by Markay Tool Products Co. Beverage container of lightweight polyethylene sheet developed by Koppers Co. Extra-strong, resilient, lightweight polyolefin strapping with no sharp edges made by Allied Products Division of American Manufacturing Co., Inc. p. Pr Jun 176
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Minnesota Mining develops typewriter paper eliminating use of ribbon or carbon. Chemical capsules are imbedded in paper which are fractured when typewriter key is hit, and chemicals flow into impression making a letter or number. p. Pr Mar 168

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Prime Mover Begins to Move. Collaborating with Gilbert Burck, projects upswing in capital spending by manufacturing industries for 1963-65 based on FORTUNE index. Feb 110-114, 208-213

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Pemex at Twenty-Five. Mexican Government oil monopoly marks anniversary as largest integrated oil and gas producer in Latin America, also largest dispenser of social services outside of federal government. Operation of six up-to-date refineries, big oil reserves, and joint ventures with U.S. companies including Du Pont in petro-chemicals noted. BG Aug 87-88

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Donald M. Kendall promoted to president and chief executive succeeding Herbert Barnet. Kendall sees aggressive competition with Coca-Cola despite big sales gain last decade. p. BM Oct 55

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PHOTOGRAPHIC EQUIPMENT
Kalvar: From a Wastebasket, Dazzling Suspense. Stephen Mahoney appraises Kalvar Corp. venture of Alfred J. Moran to promote dry-process instant-developing photographic film using simple heat method. Uncertain future looms due to potential competition and patent protection problem. Development of technique (diagram) and use in four different fields discussed. Company's profitless thirteen-year record noted. Mar 110-113, 132-138
Heat photography using special infrared camera to reveal possible weak links in electronic circuits discussed in **"Reliability" Engineering.** c.p. Apr 125
Electron diffraction camera photographs structural materials in reactor field to record atomic structure. p. Pr May 185
New QUAD industrial camera with four optical systems built onto Polaroid Land camera back, which takes up to four pictures simultaneously or in sequence using standard Polaroid film, made by Avant Inc. p. Pr Aug 178

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Invention Sprouts on California's Farms. Color portfolio by Joe Munroe shows new ingenious agricultural machines developed in California for big ranch crops. Jan 90-99
I.B.M. on the Riviera. Color portfolio by Robert M. Mottar of I.B.M.'s new French laboratory at La Gaude; to work on data transmission-communication systems. Feb 92-93
Antique Vending Machines. Color portfolio by Sol Mednick of late 19th, early 20th century vending machines. Feb 115-117
Logistics of Vertical Transport. Photos by Richard Saunders capture methods of moving building materials to upper levels of skyscrapers. Mar 89-95
"A People with the Long Eyes." Color portfolio by Ezra Stoller Associates on new Kitt Peak National Observatory in Arizona. Mar 102-103
Businessmen Who Love the Land. Color portfolio on businessmen who are leaders in promoting public conservation and related legislation. Mar 114-121
Western Gateway to New York. Portfolio including photographs by Charles Pratt of Jersey Meadows. May 122-130
Up from Gothic. Color portfolio on architectural variety, modern designs in recent new college buildings. May 142-147
Eruption of Cement on the Hudson. Color portfolio by David Plowden on new Atlantic Cement Co. plant along the Hudson River near Albany, New York. Jun 126-127
Church of the Florentine Businessmen. Color portfolio by David Lees on 14th Century Church of Or San Michele in Florence. Jun 133-137
Japan's Prime Natural Resource Is People. Color portfolio by Horace Bristol on present-day Japan. Jul 142-149
Minuteman's New Home on the Montana Range. Color portfolio by Marvin Koner on solid-fueled Minuteman missiles deployed in underground launching silos on Montana prairies. Aug 124-130

Proud Heirs of the "Best Friend". Color portfolio of Southern Railway operations applying new technology. Sep 103-109

Where They Keep the Money. Color portfolio by Ulf F. Wahlstrom illustrating manufacture of bank vaults at Mosler Safe Co. Oct 114-117

Coal's Comeback at Moss No. 3. Color portfolio on how Clinchfield Coal Co. advanced mining and processing technology. Oct 130-135

Moneymaking Train for Money-Makers. Portfolio by Ian Berry of Rheingold Express, new electric-powered train showpiece of West Germany's federal railroad system. Dec 141-143

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PHYSICS

Laser's Dazzling Future. Lawrence Lessing reviews rapid development of three-year-old laser light amplifier with unique and versatile properties opening up new region of electromagnetic spectrum, diagrams. Big 1963 research budget noted. c.p. Jun 138-142, 151-166

Tapping Nature's Storehouse of Violent Energy. George A. Boehm reviews rapid growth of plasma physics, new major field of fundamental research in thermonuclear plasma fourth state of matter demanded by new technologies. Discovery of ungaslike super-temperature properties, ionization theory discussed, diagrams, chart. c.p. Aug 130-134, 220-227

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PLANTS, INDUSTRIAL

Litton Industries uses polyvinyl chloride swimming-pool cover to seal off clean area for assembly of components of air-navigation systems. p. Pr Mar 168

Western Gateway to New York. Portfolio of pen-and-pencil sketches by Jack Zajac, commissioned by FORTUNE, and photographs by Charles Pratt of Jersey Meadows. Notes on assorted plants and refineries. May 122-130

PLASMA (IONIZED)

Tapping Nature's Storehouse of Violent Energy. George A. W. Boehm reviews rapid growth of plasma physics new major research field in thermonuclear plasma demanded by new technologies, aimed to harness unruly energies as fusion power; sponsored by U.S. scientific agencies, universities, and companies. Discovery ungaslike super-temperature properties, ionization theory, hydrogen conversion (diagrams, chart) discussed. Research concentrates on developing three basic types of machines including C Stellerator. c.p. Aug 130-134, 220-227

PLASMA JET PROCESS See CUTTING MACHINES

PLASTICS

Eight-strand plaited polypropylene plastic mooring line made by Columbian Rope Corp. p. Pr Jan 150

Plastic tank spun from glass fibers by Black, Sivalls & Bryson, Inc. for tank car built by North American Car Corp. Epoxy resin also used in tank construction. p. Pr Jun 172

Disposable purge chamber of ten-gauge plastic sheeting and argon gas for welding devised at North American Aviation, Inc. p. Pr Jul 224

National Lead develops method to coat individual fibers of glass, cellulose, and other materials with polyethylene causing fibers to retain outward shape and strength but assume the chemical and physical properties of the polymer layer. Encapsulated material called Nalcon then rolled into porous sheets. Vacuum chamber process to cool polyethylene film developed by Union Carbide Plastics Co. p. Pr Sep 179

Plastic-and-air package for delicate electronic instruments to prevent danger of breakage or shock in shipping made by Tuffy Products Co. under licensing agreement with Lockheed-California. p. Pr Nov 194

PLAYS

Let's Inc. Christian Castberg's one-act playlet in words and chart drawings satirizes organization of corporate enterprise with advice of professional management consultant. Jun 210-215

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PLUMBERS' UNION See LABOR May 238

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PRATT & WHITNEY AIRCRAFT DIVISION See UNITED AIRCRAFT CORP.

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PRESS

Mr. Kennedy's Management of the News. Dean of Washington correspondents Arthur Krock analyzes President John F. Kennedy's news-management policy, direct and indirect techniques including special treatment of reporters, background briefings giving White House aura to news and preventing objectivity. Mar 82, 199, 202

PRESSES

See also PRINTING PRESSES

New press made by Product Development Group cuts cost of reconditioning jet-engine guide vanes. p. Pr Nov 194

PRESS WHEELS, AGRICULTURAL See AGRICULTURAL—EQUIPMENT

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PRICES

See also AGRICULTURE; ANTITRUST; FOREIGN EXCHANGE Jun 113; STEEL

Forecast of price trend for next eighteen months. BR Jan 32, Jul 46

Balance of Prices. Perspective on price increases with steel rise underlining firming trend in industrial levels and slower rate in consumer prices exercising stabilizing influence, 1960-63 chart. BR May 48, 50

Prices rise due to firmer demand, but may damage trade position. BR Oct 39-40

PRINCE, FRANK J. See UNIVERSAL MATCH CORP.

PRINCETON UNIVERSITY

Random Walk in Wall Street. Discusses Econometric Research Program study of Clive W. J. Granger and Oskar Morgenstern testing merits of stock indexes, random-walk theory of price changes. PI Feb 204

PRINTED CIRCUITS See ELECTRICAL EQUIPMENT

PRINTING PRESSES

High-speed single-run offset press for perforating, imprinting and numbering bank checks, which can also do standard offset work, made by Harris-Seybold Division of Harris Intertype Corp. p. Pr Oct 190

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PRISONERS, CUBAN See CUBA

PRIVACY RIGHTS See LABOR Jan 68

PROCHNOW, HERBERT V. See UNITED STATES—FOREIGN RELATIONS Mar 126

PROCTER & GAMBLE CO.

See also ANTITRUST Dec 197

Soap Wars: A Strategic Analysis. Spencer Klaw reviews marketing strategies of three big soap companies competing for heavy-duty laundry soaps and detergents market disclosed at recent Lever Bros antitrust trial. P. & G.'s string of victories assures them lead position including non-soap products, toothpastes. Huge advertising outlays noted, chart. Jun 122-124, 182-198

PRODUCTION

See also CAPITAL INVESTMENTS Feb 110; CHINA; SPAIN; STATISTICS; TAXATION

Forecast increases in G.N.P. next 18 months, 1954-64 charts. BR Jan 27, Jul 41

Productivity gains in past two years with prospect for continuing advance along with G.N.P., employment, manufacturing, 1950-62 charts. Relation to unemployment, overtime work noted. BR Feb 44, 46

Estimates on future per cent increase in G.N.P. dollar value relative to prices and federal revenues. BR Mar 46

G.N.P. outpaces FRB production index. BR May 43

C.E.A. forecasts $583-billion G.N.P. for 1963. BR Jun 39-40

FRB index hits peak, 1960-64 chart. Big gain in G.N.P. in second quarter. Commerce Dept. revises 1962 level upward. BR Aug 31

Pocket-size recording device permitting workers to enter production information in I.B.M. 1030 system which transmits the data to a computer for analysis, enables management to get up-to-the-minute knowledge of the production cycle from inventory to finished product. p. Pr Aug 178

FRB industrial index rises 6 per cent in six months. BR Sep 43

Prospect that G.N.P. rate will surpass $600 billion this quarter; FRB industrial production index at peak. BR Nov 47

FRB industrial index rises with output outpacing inventory and capacity growth. G.N.P. expected to reach $600 billion this quarter, $585-billion rate for all of 1963. BR Dec 49-50

PRODUCTIVITY See PRODUCTION

PRODUCTS, NEW

Products & Processes. See specific products.

PROFITS See CORPORATIONS; INVESTMENTS, FOREIGN

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PROJECT NEEDLES See SPACE

PROPELLERS, AIRPLANE See AIRCRAFT INDUSTRY

PROPERTY

See also LAND; REAL ESTATE

Trade, Property, and the Dollar. Editorial urges U.S. to broaden international market including protection of private property. Jul 129-130

PROXIES See CORPORATIONS

PSYCHOLOGY See BRAIN

PUBLIC DOMAIN See LAND

PUBLIC SERVICE See CONSERVATION; ETHICS

PUBLIC UTILITIES

See also ELECTRIC POWER; NUCLEAR POWER; RURAL ELECTRIFICATION ADMINISTRATION

Brazil's move to nationalize utilities discussed in **Printing-Press Economy.** BG Mar 70

Fortune Directory annual review of 50 largest U.S. utility systems, 1962 rank in assets, operating revenues, net income, capital, table. Aug 148

PUBLIC WORKS See UNITED STATES—FINANCE

PUBLISHING See CURTIS PUBLISHING CO.; KALVAR CORP.

PULLMAN INC.

President W. Irving Osborne Jr. named chief executive succeeding Champ Carry who remains chairman. p. BM Jul 102

PULPSTONE See NORTON CO.

PUMPS

High-speed electromagnetic pump to move alkali metals at high temperatures developed for use with nuclear reactors by Atomics International division of North American Aviation, Inc. p. Pr Jun 174

PUNCHED TAPE See MILLING MACHINES

PURE OIL CO. See OIL Feb 100

PUROLATOR PRODUCTS INC. See TUNG-SOL ELECTRIC INC.

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QUADROS, JANIO See BRAZIL Mar 68

QUAKER OATS CO. See ANTITRUST Aug 115

QUALITY CONTROL

See also COAL

"Reliability" Engineering. George A. W. Boehm reports on new approach in quality control, basic concepts employing reliability number derived from testing and statistical mathematical probability; growing applications in defense contracts, industry, diagram. c.p. Apr 124-127, 181-186

QUEMOY See CHINA, NATIONALIST

QUESADA, ELWOOD

Closes out latest career as president of Washington Senators baseball team. p. BR Mar 52

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RACE PROBLEMS See NEGROES

RADAR

See also LASERS Jun 139

Goodyear Aircraft Corp. develops a combined radome and antenna to be stored, deflated in underground silo for use after nuclear attack. p. Pr Feb 160

Inflatable radomes made of coated nylon by Goodyear, designed to be transported by air and parachuted into combat zones for Marine Corps and Air Force radar-antenna programs; Westinghouse Electric Corp. prime contractor. p. Pr Apr 159

RADIATION See SPACE

RADIO CORP. OF AMERICA See LASERS Jun 160; NEGROES Sep 99

RADOMES See RADAR

RAILROADS

See also NEW JERSEY

Walter J. Tuohy president of C. & O. wins ICC approval of bid for control of ailing B. & O. in which New York Central holds 20 percent interest. p. BM Feb 58

Why the Rails Are Hot. Explains investment upsurge in rail stocks since late 1962 due largely to progress against featherbedding, mergers, increased traffic with lower rates, new special-purpose equipment, ICC's controversial accounting ruling establishing new depreciation guideline. Trend in stock prices and car loadings, 1953-63 chart. PI Jun 203-206

Stuart T. Saunders appointed chairman of Pennsylvania succeeding retiring James M. Symes, plans to increase revenues with more aggressive selling; big problem is pending New York Central merger now awaiting ICC approval. p. BM Aug 69

Proposed merger of Chicago, Rock Island & Pacific headed by Richard E. Johnson and Union Pacific headed by Edward R. Harriman may be sidetracked by Ben Heineman chairman of Chicago & North Western Railway making better offer before board has chance to vote. Despite offer, Rock Island directors vote approval U.P. bid with aid of Colonel Crown. Heineman to ask stockholders to reverse decision. p. BM Aug 75

Herman H. Pevler leaves Wabash presidency to become president and chief executive of Norfolk & Western, succeeding Stuart T. Saunders resigning to head Pennsylvania Railroad. If ICC approves pending Pennsy and New York Central merger and separate arrangement for combined operation of Wabash, N. & W., and Nickel Plate, Pevler faces increased responsibility. p. BM Sep 66

Daniel A. Benson, president of Boston & Maine, and Patrick B. McGinnis, former president, are indicted by federal grand jury charging kickback deal on noncompetitive sale of railroad cars. p. BM Sep 66

Hell of a Different Way to Run a Railroad. Harold B. Meyers reviews President D. W. Brosnan's drive to modernize Southern Railway with cost-cutting new technology, automation, centralization, improvements in freight handling and passenger services, and lower rates within framework of ICC restrictions. Anti-featherbedding policy discussed. Central of Georgia control purchase, and 1962 revenues record with fair profit noted. Trip of diesel freight train No. 153 described in detail. Sep 100-102, 210-227

Proud Heirs of the "Best Friend". Portfolio of colored photographs of Southern Railway operations applying new technology, equipment including trailers, aluminum "Big Johns." Sep 103-109

Alfred E. Perlman president of New York Central finally wins ICC approval to sit on Reading board. Central owns 11 percent of Reading stock and two roads have interchange of freight traffic. C. & O.-B. & O. combination owns 42 percent of Reading. p. BM Oct 60

Off the Tracks. Editorial endorses congressional act to avert national rail strike after four-year deadlock on dispute, but notes it is a form of compulsory arbitration leading to extended government regulation of wages and prices. Arbitration board will settle key issues, size of work force and elimination of firemen on diesel trains; lesser issues to be negotiated by companies and unions. Oct 100

Ride on the Rails. Chronology of frantic burst of stock market trading in rail stocks touched off by series of confusing midafternoon announcements on threatened rail strike illustrates emotional character of stock market and pitfalls of buying on "news." Trading patterns of Pennsylvania, New York Central, Santa Fe typical of all rail stocks, chart. PI Oct 231-232

Moneymaking Train for Money-Makers. Portfolio of black-and-white photographs illustrates Rheingold Express, new electric-powered showpiece of *Budesbahn* West Germany's federal railroad system. Special passenger services cater to businessmen. Dec 141-143

Equipment

Self-propelled carrier designed to load and unload semitrailers on flatcars with lifting capacity of 30 tons and able to select a container from the middle of a car, made by Towmotor Corp. p. Pr Mar 162

Portable mixer for tank cars powered with air motor for petrochemicals avoids mixing in separate tank for shipment, made by General American Transportation Corp. p. Pr May 186

Plastic tank spun from glass fibers by Black, Sivalls & Bryson, Inc. for tank car built by North American Car Corp. p. Pr Jun 172

Continuous rail-laying equipment permitting simultaneous laying of two welded rails sold by Railway Equipment Maintenance Corp. p. Pr Aug 176

To speed up stress relieving of storage tanks, Master Tank & Welding converts a flatcar to roll directly into the heat chamber and car becomes floor of high-temperature furnace. p. Pr Nov 192

Automated freight house which consolidates forwarders' less-than-carload freight so it can be shipped at carload rates developed by General Electric for Missouri Pacific Railroad. p. Pr Dec 187

RALSTON PURINA CO.

President Raymond E. Rowland negotiates preliminary agreement to merge with Van Camp Sea Food Co. p. BM Apr 52

RAMO, SIMON See THOMPSON RAMO WOOLDRIDGE INC. Feb 97

RANCHES See IRVINE CO.

RANDOM WALK THEORY See STOCK MARKET

RANGER PROJECT See SPACE

RANSOM See CUBA

RAPID-AMERICAN CORP.

Who's to Blame for Riklis?—Riklis? Stanley H. Brown reviews setbacks of Meshulam Riklis as board chairman of Rapid-American and McCrory Corp. involving huge debt due to failure to realize projected earnings, McCrory stockholder suits charging conflict of interest. Series of complex transactions to assure creditors include liquidation of money-losing divisions. Stock prices drop, 1962-63 chart. Oct 136-137, 236-240

RASKOB, JOHN J. See GENERAL MOTORS CORP. Sep 138

RATHBONE, MONROE JACKSON See STANDARD OIL CO. (NEW JERSEY)

RAYTHEON CO.

See also LASERS Jun 156

D. Brainerd Holmes former head of NASA becomes senior vice president. p. BM Sep 60

RAZOR BLADES See GILLETTE CO.

REA See RURAL ELECTRIFICATION ADMINISTRATION

READING RAILWAY SYSTEM See RAILROADS

REAL ESTATE

"Monopoly Game". Real-estate boom in Beirut with skyscrapers replacing old houses and ultra-modern apartments studding outskirts, due to investments of Lebanese emigrants and Arab aristocrats. Recent deals including hotels. Prices of houses and land jump. p. BG Jun 76

William Zeckendorf, chairman of chronically over-extended Webb & Knapp, Inc., struggles to raise cash to pay $68 million short-term debt and $10 million arrearages on rents and mortgage payments. Company's big deficit in 1962. p. BM Jul 108

Uris Building Corp. leases newest Manhattan building to J. C. Penney & Co., largest multi-tenant building lease ever signed in New York. p. BM Oct 56

Faces and Prices of the National Estate. Portfolio of colored photographs and notes on size of U.S. national estate, acreage, price range from $4 to $9 million. Oct 125-127

88,000 Golden Acres Waiting for the Dust to Settle. Seymour Freedgood reports on family-held Irvine Co. controlling 138-square-mile Irvine Ranch which blocks growth of metropolitan Los Angeles. Board of directors clash over proposed urban development plan backed by James Irvine Foundation, which controls company, and opposed by faction led by Joan Irvine resolute granddaughter of J. I. Irvine the late founder. Nov 142-147, 252-267

Real-Estate Markets.

Part I. Future of the Office Building Boom. Daniel Seligman appraises postwar nationwide office-building boom, strength of market discounting current misgivings, with focus on New York, world's leading office center, space demand, new zoning law, speculative and "monument" builders. City-by-city boomlets outside New York and unique local situations, overbuilding noted. Mar 84-88, 214-223

Part II. Move to Apartments. Daniel Seligman explores apartment market prospects, indications of continuing strong building rate for next decade. Favorable factors are increasing percentage of small, childless households, need for more intensive use of urban and suburban land. Builders' problems, overbuilding of high-rise luxury units, various projects, rental and vacancy rates discussed, charts. Apr 98-101, 221-226

Part III. Where's the Ceiling on New Houses? John McDonald analyzes outlook for builders of single-family houses in 1960's, new complexities with rising land costs, building codes, legal and moving costs in trading up to better houses. Market shifts since 1954 noted. Hopeful signs are increased personal income, "cluster planning" for efficient land use, new self-sufficient cities, management builders using modern methods. 1940-60 charts. c.p. Jun 128-132, 216-223

Part IV. Hotels: Time to Stop and Rest. Seymour Freedgood appraises hotel-motel building boom with 1962 peak over $1 billion. Signs hotel surge is ending with drop in demand, revenues, but pace of motels continues vigorous in financing and investment appeal. Trend in building by major chains; 1945-64 chart. c.p. July 162-165, 202-213

Part V. Squeeze on Shopping Centers. Katharine Hamill explores special economics of shopping centers, difficulties pressing developers, rising operating costs, shrewd negotiations of big retailer-tenants for low rents, less favorable terms of financiers, investment-rate decline, intense competition of downtown stores and discounters. Steps in developing a strategic site, and promotion innovations noted. c.p. Sep 116-118, 238-239

Part VI. Strange Leveling Off in Land. Hubert Kay examines flattening out of long national land boom, sales and prices based on FORTUNE survey of twenty metropolitan areas and soundings in fifty-three others. Four uniform market groups disclosed. Higher property tax as step toward freeing market in line with projected demand suggested. Oct 124-129, 214-222

REAMERS See EXCAVATING MACHINERY

RECLAMATION, BUREAU OF See ELECTRIC POWER

RECORDING MACHINES, PRODUCTION See PRODUCTION

RECREATION See CONSERVATION

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REES, ALBERT See LABOR May 240

REFLECTORS See SATELLITES; SOLAR ENERGY

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REICHERS, EDWIN A. See BANKS & BANKING Feb 201

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REICHHOLD CHEMICALS, INC.

Henry H. Reichhold reassumes title of chairman. p. BM Jun 58

REISTLE, CARL, JR. See HUMBLE OIL & REFINING CO.

RELIABILITY ENGINEERING See QUALITY CONTROL

RENAULT See AUTOMOBILES—EUROPE Aug 98

RENTSCHLER, FREDERICK B. See UNITED AIRCRAFT CORP. Dec 114

REPORTERS & REPORTING See PRESS

REPORTS, ANNUAL See TAXATION

REPUBLICAN PARTY

See also UNITED STATES—CONGRESS

Here Come the Conservatives. Richard J. Whalen appraises the revival of conservatism in U.S. politics, especially in the Republican Party, proclaiming the rights of the individual against the expanding power of the federal government. Intellectual stimulus and historical background, emergence of Senator Goldwater discussed. Group of leaders, drawing. Dec 106-109, 238-243

REPUBLIC AVIATION INC. See PLASMA (IONIZED) Aug 133

REPUBLIC STEEL CORP.

Thomas F. Patton chief executive of one of U.S. companies exceeding $1 billion sales in 1962, p. BM Apr 58

RESEARCH

See also specific fields, e.g. MEDICINE; PHYSICS

Spending for Symmetry. Editorial disapproves Commerce Dept. proposal to establish government-sponsored Civilian Industrial Technology program to correct imbalance favoring military and space projects. Points out industry's research record; advises Administration to cut costs. May 104

RESTAURANTS See BUILDING

RESTON, VIRGINIA See BUILDING Jun 131

RETAIL TRADE See CONSUMER SPENDING; CREDIT; STORES

RETIREMENT See LABOR Feb 46

RETRAINING OF EMPLOYEES See MANAGEMENT

REUTHER, WALTER P. See LABOR May 112; TAXATION Jan 74

REVELLE, ROGER See MOHOLE PROJECT May 140

REY, JEAN See COMMON MARKET Jan 52

REYNOLDS, R. J., TOBACCO CO. See TOBACCO Jan 100

REYNOLDS & CO. See BROKERS

RHEINGOLD EXPRESS See RAILROADS—GERMANY

RHONE-POULENC See DRUGS Dec 125

RHYNE, CHARLES S. See LAW Aug 91

RICE, CHARLES G. See UNITED STATES SMELTING, REFINING & MINING CO.

RICE, J. LEE, JR. See ELECTRIC POWER Jan 44

RIESER, CARL (AUTHOR)

Great Credit Pump. Reviews phenomenal growth of trade credit that business extends to business, situation in various industries. Feb 122-124, 148-157

When the Crowd Goes One Way Litton Goes the Other. Reviews tremendous ten-year growth of Litton Industries. May 114-118, 220-228

Unfinished Job at W. R. Grace. Reviews transformation of family trading and shipping empire under President Peter Grace since 1945, retreat from unstable Latin America, entry and rapid expansion in chemicals, and other diverse moves. Aug 108-113, 228-232

RIKLIS, MESHULAM

Who's to Blame for Riklis?—Riklis? Stanley H. Brown details setbacks as board chairman of Rapid-American Corp. and McCrory Corp. p. Oct 136-137, 236-240

RINCLIFFE, ROY G. See ELECTRIC POWER Jan 44

RINSO (TRADE NAME) See SOAP

RIO DE JANEIRO See BRAZIL

RISK CAPITAL See INVESTMENTS

RITCHIE, LORD See STOCK MARKET—LONDON Apr 74

RIVERS

See also RURAL ELECTRIFICATION ADMINISTRATION

Busy Days on the Big Muddy. Portfolio of impressionist paintings by Robert A. Parker of Missouri River boats and barges with notes on recent big increase in commercial freight, Sioux City & New Orleans Barge Lines biggest operator. Rising cost of government's long-range Missouri Basin project noted. Nov 154-159

Floating pipeline system or direct pump-out of silt and mud to keep Delaware River channel clear devised by Army's Corps of Engineers. p. Pr Nov 189

RIVETING

See also MISSILES & ROCKETS

First commercial high-speed horizontal riveter made by Milford (Conn.) Rivet & Machine Co. p. Pr Aug 174

RIVIERA See FRANCE

RNA See MEDICINE Feb 192

ROADS

See also JAPAN July 148; NEW JERSEY

Crossing That Defies the Atlantic. Portfolio of colored photographs illustrates construction of $140 million bridge-tunnel highway across Chesapeake Bay from Cape Charles to Norfolk, Va.; notes on building four islands, two steel-tube tunnels, trestle highway, meeting difficulties of weather and elements, map. Apr 112-121

Road barricades made of Dow polyethylene which bounce back when knocked down by cars made by Techni-Builders, Inc. p. Pr Jul 226

Half-Billion-Dollar Lace to Tie the Italian Boot. Portfolio of impressionist paintings by Hugo Wetli shows $480-million Autostrada del Sole Italian superhighway. Direct route across the Appenines and Lombardy Plains from Milan to Bologna, Florence, Rome, Naples stimulates economy, ends isolation of many communities. Aug 102-107

Holland Roller Coater one-man paver to lay and roll asphalt-and-stone pavement in one continuous operation made by Thiokol Chemical Corp.'s Shawnee Industries. "Fram 63" double-purpose tool which can be converted from rock drill to road breaker made by Warsop Power Tools in

England and distributed in U.S. by Dillon & McAfee. p. Pr Nov 192, 194
Experimental versatile slip-form paver made by Koehring Co. p. Pr Dec 190

ROBBINS, DONALD G., JR. See SINGER CO. Dec 147

ROBERTS, NORBERT J. See MEDICINE Apr 123

ROBINSON, JACKIE See CHOCK FULL O'NUTS CORP.

ROBINSON-PATMAN ACT See ANTITRUST

ROBOTS
Diving robot with two propellers, television camera, sonar, and remote-control arm to turn screws, valves developed by Shell Oil Co. used for deep-sea diving jobs. p. Pr Jan 155

ROCHE, JAMES M. See GENERAL MOTORS CORP. Jun 100

ROCKEFELLER, DAVID See MANAGEMENT Nov 78; TAXATION Jan 74

ROCKEFELLER, JAMES S. See BANKS & BANKING May 82

ROCKEFELLER, LAURANCE S. See BUSINESSMEN Mar 119

ROCKEFELLER, NELSON A. See MEDICINE May 167

ROCKETS See MISSILES & ROCKETS

ROCK ISLAND RAILROAD See RAILROADS

ROCKS
Unique oil-exploration tool called Dinoseis, which measures rock strata to granite level with seismic impulse, produced by explosive inside steel chamber held down by a Euclid grader, designed by Sinclair Research, Inc. Portable seismic timer with sledge hammer to determine rock properties down to 100 feet below the surface, used mainly for foundation studies, designed by Dyna Metric, Inc. p. Pr Oct 188

ROCKVILLE CENTRE TRUST CO. See BANKS & BANKING

ROEPKE, WILHEIM See BOOKS

ROKIDE See NORTON CO.

ROLDAN, PASCUAL GUTIERREZ See PEMEX

ROLLERT, EDWARD D. See GENERAL MOTORS CORP. Jun 102

ROME See ITALY

ROOFS See BUILDING

ROOMS See BUILDING

ROOSEVELT, FRANKLIN D. See KENNEDY, JOSEPH P. Jan 114

ROOTES, LORD See BUSINESSMEN—EUROPE Aug 100

ROPE
Eight-strand plaited polypropylene plastic mooring line made by Columbian Rope Corp. p. Pr Jan 150

ROSS, IRWIN (AUTHOR)
Bob Six's Bag of Tricks. Describes how Robert F. Six built Continental Airlines from scratch. Feb 130-132, 194-198
General Aniline Goes Private. Assesses present condition and prospects of General Aniline & Film Corp. pending final sale to private owners by U.S. Government, chief owner since seizure as enemy property in 1942. Sep 127-129, 144-156

ROSS, JORGE See MANAGEMENT Nov 72

ROTH, HAROLD See CONTINENTAL VENDING MACHINE CORP.

ROWLAND, RAYMOND E. See RALSTON PURINA CO.

ROYAL TEXTILE MILLS NIJVERDAL-TEN CATE N. V. See TEXTILES Apr 174

RUBBER
New fast processing system, extruding latex in dry crumbs and conveying to a baling machine, designed by Goodyear Tire & Rubber Co. with French Oil Mill Machinery Co. p. Pr Oct 190

RUBIES See GEMS

RUBIN, MORRIS J. See UNITED STATES SMELTING, REFINING & MINING CO.

RUBIO, NAVARRO See SPAIN Nov 93

RUBY LASER See LASERS Jun 140

RUDE, ARTHUR H. See AEROJET-GENERAL CORP.

RUIZ LUCIARTE, FERNANDO See INVENTIONS

RURAL ELECTRIFICATION ADMINISTRATION
There's No Stopping REA — Or Is There? Hubert Kay reviews REA-financed rural electric co-ops' rapid growth in competition with electric-power companies, invading non-farm territories and threatening federally-subsidized, tax-free nationalized system. Tie-in with federal multi-purpose hydro dams, Upper Missouri Basin joint Bureau of Reclamation development plan, broadened low-rate G & T loans, N.R.E.C.A. powerful lobby, and proposal for independence from government discussed. Five millionth customer. p. Feb 118-121, 170-184

RUSSELL, GEORGE See GENERAL MOTORS CORP. Jun 100

RUSSIA See U.S.S.R.

RUST See COATINGS

RUTA, PETER See ART

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SAFES See BANKS & BANKING

SAFETY CAPE See CLOTHING

ST. ANDREW'S PRESBYTERIAN COLLEGE See COLLEGES & UNIVERSITIES May 142

ST. CLAIR, JAMES D. See TRANSITRON ELECTRONIC CORP. Mar 192

SALARIES See CORPORATIONS May 231

SALEH, CHAERUL See INDONESIA, REPUBLIC OF

SALES See CONSUMER SPENDING; CORPORATIONS; CREDIT Feb 124; INVENTORIES

SALMON See FISH & FISHING Dec 222

SALT WATER See WATER

SALTZMAN, MAURICE See BOBBIE BROOKS, INC.

SAMUELSON, PAUL A. See ECONOMICS Apr 84; TAXATION Jan 74

SAND See LAND

SANDOZ PHARMACEUTICALS See DRUGS Dec 124

SAN FRANCISCO, CALIFORNIA See OFFICE BUILDINGS Mar 218; REAL ESTATE Oct 220

SANTA FE RAILROAD See RAILROADS

SAN THIAGO DANTAS, FRANCISCO C. DE See BRAZIL Mar 63

SANTRY, ARTHUR J. See COMBUSTION ENGINEERING, INC.

SAO PAULO See BRAZIL

SAPPHIRES See GEMS

SARAON, J. SINGH See MANAGEMENT Nov 71

SATELLITES
See also SPACE
Echo II NASA's new radio and radar signal reflector made by G. T. Schjeldahl Co. of aluminum and Mylar skin to replace deteriorating Echo I. During test inflation inspector rides in a "satellite's satellite," small plastic balloon. p. Pr Oct 187

SATURN PROJECT See SPACE

SAUNDERS, RICHARD (PHOTOGRAPHER)
Logistics of Vertical Transport. Photographs of hoists and cranes lifting building materials to workers on the steel frames of New York's rising skyscrapers. Mar 89-95

SAUNDERS, STUART T. See PENNSYLVANIA RAILROAD

SAVINGS
See also BANKS & BANKING Oct 111
Prospect for rise in net saving with shift to consumer income credit, 1957-63 chart. BR Mar 40
Forecasts indicate uptrend in personal savings rate next eighteen months. BR Jan 32, Jul 46
Drift to Thrift. Discusses resurgence of thrift in past two years with big increase in individual savings in thrift institutions, savings-and-loan associations, mutual savings banks and savings accounts in commercial banks due to investors switching out of stocks after 1962 stock market collapse and rising interest rates. PI July 261-264
Rising rate to be factor in new advances in consumption. BR Aug 31-32
Consumer Saving. Extraordinary growth in liquid savings, cash, time and savings deposits, private insurance, pension reserves with record total $38.7 billion in 1962, 1957-63, chart. BR Oct 40, 44-46

SAVINGS-AND-LOAN ASSOCIATIONS See SAVINGS

SAWS
High-speed water jet unit cuts through thick maple plank, with extra-thin cuts saving sawdust, in University of Michigan research project, partly financed by U.S. Forest Products Laboratory. p. Pr Jun 171
Improved lightweight air-powered saw driven by pistons with variable-speed blade instead of gears made by Cengar U.S., Inc. p. Pr Oct 188

SAXON, JAMES J. See BANKS & BANKING

SCHAEFER & SEAWELL See PHOTOGRAPHY

SCHARFFENBERGER, GEORGE T. See LITTON INDUSTRIES May 116

SCHEIBEL, ARNOLD B. & MADGE E. See MEDICINE Feb 125

SCHERER, PAUL A. See MOHOLE PROJECT May 141

SCHIRMER, WALTER E. See CLARK EQUIPMENT CO.

SCHNEEBELI, HERMAN T. See TAXATION

SCHOOLS, ENGINEERING See ENGINEERING

SCHRODER, ANDREW See SCOTT PAPER CO. Apr 123

SCHWARTZ, DANIEL See ART

SCHWARTZ, DAVID See JONATHAN LOGAN, INC.

SCHWEITZER, PIERRE-PAUL See INTERNATIONAL MONETARY FUND

SCOTCH WHISKY See LIQUOR

SCOTLAND
Distillers Co. Fights Back. Distillers Co. Ltd. Scotland's biggest Scotch whisky producer markets new light versions of two brands and relaxes ban on bulk shipments; takes aggressive steps to meet stiff competition of independents, especially in U.S. market. BG Oct 75-81

SCOTT PAPER CO.
Keeping Executives Healthy. Samuel Bryant reports on how company developed employee medical program for new headquarters from study of outside clinics, particularly impressive Standard Oil (N.J.) plan, other corporate facilities. Director Dr. Kendall Elsom set up program, handled policy decisions on voluntary medical examinations, employee privacy, management relations. Caricature drawings. Apr 122-123, 134-145

SCOVILL MANUFACTURING CO.
Malcolm Baldrige new president and chief executive. p. BM May 80

SCRAP METALS See ANTITRUST Aug 116

SCULPTURE See ART

SEAFARERS' UNION See LABOR

SEA FOOD See FOOD

SEAGRAM BUILDING See OFFICE BUILDINGS Mar 87

SEAMEN See LABOR

SEARLE, G. D., & CO.
John G. Searle negotiates Abbott Laboratories merger. p. BM Sep 64

SEARLE, JOHN G. See SEARLE, G. D., & CO.

SEARLE, RONALD See ART

SEARS, ROEBUCK & CO. See CORPORATIONS

SEATON, LOUIS G. See GENERAL MOTORS CORP. Jun 111

SEA WATER See WATER

SEC See SECURITIES & EXCHANGE COMMISSION

SECAM See TELEVISION

SECURITIES See CORPORATIONS; INVESTMENTS; STOCK MARKET; TAXATION

SECURITIES & EXCHANGE COMMISSION
See also BANKS & BANKING May 82; CORPORATIONS; INVESTMENTS; STOCK MARKET; TAXATION

Road to 10-K. Review of SEC recommendations in Special Study of Securities Markets for strict regulation of over-the-counter companies, requiring all companies with over 300 stockholders to file 10-K reports on corporate data. Insiders to be subject to listed stock rules; short selling banned. PI May 231-232

Question of Skill, Not Scandal. Editorial appraises second installment of Special Study of the Securities Market. Report attacks professional standards of service and competence, unreliable over-the-counter price quotations; contends specialists do not stablize the market and calls for end of floor traders, but fails to establish existence of widespread corruption demanding drastic reform. Aug 92

SECURITIES & EXCHANGE ACT See INVESTMENTS

SEED SPREADER See AGRICULTURE—EQUIPMENT

SEGREGATION See NEGROES

SEISMIC TIMER See ROCKS

SEKISUI CHEMICAL CO. See JAPAN Jul 138

SELIGMAN, DANIEL (AUTHOR)
Future of the Office Building Boom. Appraises postwar nationwide office-building boom, focusing on New York. Mar 84-88, 214-223

Move to Apartments. Explores apartment market prospects; discusses builders' current problems and projects. Apr 98-101, 221-226

SEMA-2000 See SINGER CO. Dec 164

SEMICONDUCTORS See LASERS Jun 152

SEMITRAILERS See TRUCKS & TRUCKING

SENATE See UNITED STATES—CONGRESS

SENSES See BRAIN

SENSOR, OCEAN CURRENT See OCEANOGRAPHY

SERVICE STATIONS See OIL

727 (AIRPLANE) See AIRCRAFT INDUSTRY

SEWING MACHINES See SINGER CO.

SHARP, MITCHELL See CANADA Jul 113

SHEA, STEPHEN W. See GREAT ATLANTIC & PACIFIC TEA CO. Mar 107

SHEEHAN, ROBERT (AUTHOR)
Thompson Ramo Wooldridge: Two Wings in Space. Reviews company's founding as government contractor in space technology, merger with Thompson Products. Feb 94-99, 134-146

How General Motors Did It. Analyzes corporation's top position in 1962-63 passenger-car market boom with sales over $14 billion. Jun 96-111, 224-234

What's Rocking Those Rocks, the Banks. Reviews ferment in commercial banks to liberalize conflicting federal and state regulations hampering change, notes various legislative proposals. Oct 108-113, 242-246

SHELL HOUSING See BUILDING

SHELL INDONESIA See OIL—INDONESIA Aug 79

SHEPARD, HORACE A. See THOMPSON RAMO WOOLDRIDGE INC. Feb 99

SHEPPARD, FRANK C. See MOHOLE PROJECT May 141

SHERATON CORP. OF AMERICA See HOTELS Jul 164

SHERMAN ANTITRUST ACT See ANTITRUST Aug 115, Dec 138

SHIPBUILDING
See also LITTON INDUSTRIES
Angela first of two seagoing barges built to move bulk cement from Atlantic Cement Co., Inc. to east coast distribution points designed by H. C. Downer Associates, Inc. and built by Avondale Shipyards for Moran Towing Corp. p. Pr Feb 159

When the Crowd Goes One Way Litton Goes the Other. Carl Rieser reviews Litton Industries growth, mergers including Ingalls Shipbuilding, building of nuclear attack submarine U.S.S. *Haddock*. Electronic gear market noted. f.c.p. May 118-119

Indoor straight-line fabrication and mechanization at Gotaverken's new Arendal shipyard in Göteberg, Sweden cuts construction time by half. Raw steel plates are conveyed from waterfront and as each section is completed the ship is pushed by hydraulic jacks down the ways. p. Pr Sep 174

SHIPPING
See also GRACE, W.R., & CO.; JAPAN Dec. 88; LABOR; PANAMA
Manuel Kulukundis sued by U.S. Government for failing to cover insured loans to build three new tankers with promised collateral. Seafarers Union "arrests" ten of his ships to recover part of his debt to union. p. BM Apr 52

Deep-water bow mooring and loading structure serving supertankers at Esso Standard Libya terminal designed by G. A. McGammon. Norwegian-owned M/V *Besseggen* with three gantry-cranes that travel on rails on deck is one of two sister ships designed to haul newsprint from British Columbia mills to U.S. West Coast ports under charter to Crown Zellerbach Corp. p. Pr May 186

Busy Days on the Big Muddy. Portfolio of paintings by Robert A. Parker depicts Missouri River boats and barges; notes recent big increase in commercial freight, main upstream cargo steel and downstream grain. Sioux City & New Orleans Barge Lines biggest operator. Nov 154-159

Tents of Herculite industrial nylon weave between layers of vinyl hide, which can be rigged quickly with standard rigging lines, made by L. Marino, Inc. to protect cargo from heavy rains. Used to load coffee in Columbia. p. Pr Nov 189

End of the Lean Years. Sudden boom in world shipping with rush of early winter sailings and foreign rate jump to seven-year high expected to revive dying American shipping industry. Shippers scramble for ships to hedge against shortage. Manuel E. Kulukundis, in the midst of bankruptcy liquidation, sees chance to salvage remainder of fleet. BG Dec 84-88

SHOEMAKER, MONTE E. See BROWN SHOE CO.

SHOES
See also ANTITRUST Dec. 192; BROWN SHOE CO.; ENDICOTT JOHNSON CORP.
New liquid-plastic soling process, which works best for shoes made of vinyl or fabric, developed by American Research & Development Co. p. Pr Feb 169

SHOPPING CENTERS See STORES

SHORT SELLING See STOCK MARKET

SHOVELS
Remote-control tractor shovel carries red-hot slag from open-hearth pit to the dump. Remote-control gear made by Westinghouse Air Brake Co. p. Pr Mar 162

SIAM DI TELLA LTDA.
Guy Clutterbuck, board chairman of Argentina's largest private manufacturing complex, calmly assesses current recession crisis, big 1963 profits decline due to rapid expansion program, expresses confidence in future. p. BG Feb 66

SICKLE BARS
Underwater sickle bar to cut weeds below the waterline, using one horizontal and two vertical blades to prevent fouling, powered by Clinton gas engine, and fitting any rowboat sold by Jari Products, Inc. p. Pr Sep 180

SIDE LOADER See LOADING MACHINES

SIEKMAN, PHILIP (AUTHOR)
Depressed Cork. Reports critical economic situation in Argentina under drifting puppet government of President José Maria Guido. BG Feb 65-77

SIEMENS & HALSKE A. G. See ELECTRICAL EQUIPMENT Sep 111

SIGNAL OIL & GAS CO.
President Samuel B. Mosher negotiates merger with Garrett Corp. p. BM Dec 66

SIKORSKY, IGOR See UNITED AIRCRAFT CORP. Dec 113

SILBERMAN, CHARLES E. (AUTHOR)
Businessman and the Negro. Analyzes new direction of Negro's civil rights struggle with demand for job equality key issue; links intensity of U.S. integration movement to present corporate employment practices, and suggests influential role of businessmen. Article based on chapter in new book *Crisis in Black and White*. Sep 96-99, 184-194

SILOS See AGRICULTURE—EQUIPMENT

SILENCER-COOLERS See GAS TURBINES

SILICON
Float-zone process produces extra large silicon crystals at Dow Corning for powerful semiconductor devices. p. Pr 164

SILVER
Not-So-Free Silver. Trading in silver futures resumed after 29 years due to assumption that "free market" is restored. In 1961 Treasury stopped selling silver to meet need for coins which triggered price rise and return of speculator. In 1963 Treasury got Congress to revise silver legislation increasing supply of "free silver," repealing silver tax, and authorizing gradual retirement of certificates. Bache & Co. leading brokers, Irving Louis expert noted. PI Oct 232, 234

SIMCA AUTOMOBILES, S. A. See AUTOMOBILES—EUROPE Aug 100; CHRYSLER CORP.

SIMON, ROBERT E., JR. See BUILDING Jun 131

SIMONS, HENRY C. See TAXATION Apr 86

SIMULATORS, SPACE ENVIRONMENT See SPACE

SINCLAIR OIL CORP.
See also OIL Feb 100
President Edward L. Steiniger announces purchase of Texas Gulf's domestic and foreign oil and gas properties including reserves in Libya; also buys Western Natural Gas Co. properties. p. BM Oct 60

SINGER CO.
It's a Spryer Singer. Edmund K. Faltenmayer reviews President Donald P. Kircher's vigorous rehabilitation of ossified company since 1958, broad diversification program and decentralized management move. Numerous company acquisitions include Haller, Raymond & Brown in electronics and computers (H.R.B.-Singer), new Metrics Division step in advanced technology, Friden Inc. office machines, low-cost data processing equipment. Foreign expansion and recovery of sewing-machine market from Japanese invasion, 1962 profits record (1955-63 chart) noted. Dec 144-148, 154-168

SIX, ROBERT F. See CONTINENTAL AIRLINES

SIZER, CARTON See PACKAGING

SKYSCRAPERS See BUILDING

SLASHING PROCESS See TEXTILES

SLIGH, CHARLES R., JR. See TAXATION Jan 74

SLOAN, ALFRED P., JR.
See also GENERAL MOTORS CORP. Jun 98
FORTUNE cover painting by Robert Weaver. Sep
My Years with General Motors business autobiography.
Part I. A Quarter Century of Glorious Creation—and a Downfall. Reviews Walter C. Durant's organization based on diversified line of cars for varied tastes and economic levels, integrated parts manufacture, mergers, management ineptitudes, bankers' refinancing and control involving Du Pont interests. p. Sep 135-142, 196-204
Part II. We Decide What We're Trying to Do—and Then Don't Do it. Discusses irresolute years, reorganization incorporating decentralization and coordinated control based on Organization Study, new product policy to mass-produce full line of cars graded upward in quality and price to meet Ford's Model T competition. Sloan succeeds Du Pont as president, p. Oct 145-148, 194-213
Part III. Our Strategy Works Out to a "T"—and the Model T Goes Under. Reviews in detail how Sloan extended management decentralization and coordination program, set up new committees and controls of capital investment, inventory, production. Strategy to displace Ford as biggest seller discussed. Nov 167-170, 198-216
Part IV. We Struggle for a Delicate Balance of Management. Recounts company's reappraisal of management, further coordinate decentralization to meet contraction of business in depression of early 1930's, resulting economies. How policy is developed; basic decision-making process described. Dec 149-152, 173-185

SMITH, C. R. See AIR LINES

SMITH, FRED See BUSINESSMEN Mar 116

SMITH, JOHN See FOREIGN EXCHANGE Feb 201

SMITH, RICHARD A. (AUTHOR)
$7-Billion Contract That Changes the Rules.
Part I. Describes how Defense Dept. let contract for TFX new joint Navy-Air Force variable-sweep wing jet fighter-bomber, setting new pattern for coordinated weapons procurement. Mar 96-101, 182-188
Part II. Probes prolonged playoff between Boeing and General Dynamics-Grumman evaluation teams, Defense Secretary McNamara's new rules on design and costs, and final contract award. Apr 110-111, 191-200
Onrushing Auto Makers. Appraises rapid growth of Western European automobile industry during past decade, uncertain market prospects. Aug 96-101, 190-204
Now It's an Agonizing Reappraisal of the Moon Race. Reviews growing doubts about space program, prospects of drastic realignment, especially of Apollo moon project. Nov 124-129, 268-280

SNITZER, ELIAS See LASERS Jun 152

SOAP
Soap Wars: A Strategic Analysis. Spencer Klaw reviews three big soap companies' marketing strategies competing for $900-million heavy-duty laundry soap and detergent market based on disclosures of secret records at recent antitrust trial on Lever Bros. deal with Monsanto Chemical. P. & G.'s enormous success with Tide, Cheer, non-soap products, Lever's ill-starred Surf, Rinso Blue, Colgate's moderately-successful Fab noted. Schedule of TV commercials charted. c.p. Jun 122-125, 182-198

SOCIALIZED MEDICINE See MEDICINE

SOCIAL SECURITY See UNITED STATES—CONGRESS

SOCIEDAD INDUSTRIAL AMERICANA MAQUINARIS See SIAM DI TELLA LTDA.

SOCIÉTE DES MINES DE FER DE MÉKAMBO See IRON

SOCONY MOBIL OIL CO.
See also OIL Feb 100, Aug 79
Chairman Albert L. Nickerson announces plan to purchase Virginia-Carolina Chemical Corp. through exchange of stock. p. BM Sep 64

SOFT DRINKS See PEPSI-COLA CO.

SOLAR ENERGY
See also THOMPSON RAMO WOOLDRIDGE INC.
Experimental "petal" of aluminum-nickel for use in solar-reflector power plant to be unfurled in space designed by Electro-Optical Systems Inc. p. Pr Nov 189

SOLID FUEL See ROCKETS

SOLIDPREP SAMPLER See TESTING

SOLING PROCESS, SHOE See SHOES

SOLINSKY, ROBERT S. See NATIONAL CAN CORP.

SOLOMON, EMMETT G. See BANKS & BANKING

SOLOVIOFF, NICHOLAS
See also ART
Vanishing Glory in Business Buildings. Portfolio of drawings of old classic Roman-style buildings in New York City built between 1890 and 1928. Sep 119-126

SOLOW, HERBERT (AUTHOR)
How NSF Got Lost in Mohole. Reviews dragging delay and mounting expenses in Project Mohole experiment to probe beneath the earth's crust. May 138-141, 198-209

SOMIFER See IRON

SONY CORP. See JAPAN Jul 271

SOROKIN, PETER P. See LASERS Jun 152

SOURCE SELECTION BOARD See CONTRACTS, GOVERNMENT

SOUTH AMERICA See LATIN AMERICA

SOUTHERN CALIFORNIA EDISON CO. See NUCLEAR POWER Jul 173

SOUTHERN PERU COPPER CORP. See AMERICAN SMELTING & REFINING CO.

SOUTHERN RAILWAY
Hell of a Different Way to Run a Railroad. Harold B. Meyers reviews President D. W. Brosnan's drive to modernize Southern Railway with cost-cutting new technology, automation, centralization, improvements in freight handling and passenger services, and lower rates within framework of ICC restrictions. Anti-featherbedding policy discussed. Central of Georgia control purchase, and 1962 revenues record with fair profit noted. Trip of diesel freight train No. 153 described in detail. Sep 100-102, 210-227
Proud Heirs of the "Best Friend". Portfolio of colored photographs depicts operations applying new technology, equipment. Sep 103-109

SOVIET UNION See U.S.S.R.

SPACE
See also LASERS; THOMPSON RAMO WOOLDRIDGE INC.; UNITED AIRCRAFT CORP.
Friction-free machine built by G.E.'s Valley Forge Space Technology Center enables astronauts to duplicate weightless condition of space while performing various tasks. New leak detector, translating ultrasonic vibrations into audible sounds to test spacecraft compartments, made by Delcon Corp. p. Pr Jan 145, 148
Project Needles (West Ford), proposed space belt of fine needles, viewed as effective measure to meet problem of accidental nuclear explosion. **How to Plan to Beat Hell** Jan 206
Cone-weld fixture developed by Martin Co. to weld fuel-tank sections of Titan II, using preshaped aluminum alloy sheets. p. Pr Feb 162
"Fail safe" bolt designed for high-speed aircraft and space vehicles will lock in place if vibration causes nut to loosen, developed at Lockheed Aircraft and produced by Standard Pressed Steel. p. Pr Mar 167
Experimental nuclear gyroscope for space-vehicle guidance with no moving parts made by General Precision Inc. Gyro consists of cell filled with mercury isotopes spinning on their own axes. p. Pr Apr 164
3-MEV particle accelerator built by Radiation Dynamics, Inc. to be used at Boeing Co. in space-environment simulation. p. Pr Jun 172
Guidance system for unmanned space vehicles based on calculation between stars developed by General Precision, Inc. Experimental antenna to communicate with spacecraft using styrofoam as structural material built by Sylvania Electric Products, Inc. p. Pr Aug 173
Hydraulic technique used to form huge curbed fuel bulkheads of the Saturn V booster for the Apollo manned spacecraft to the moon developed by Boeing Co. p. Pr Sep 179
Saturn V rocket valves and fuel lines test apparatus developed by Wyle Laboratories. Domes for large missile booster tanks being molded through explosion-forming instead of being welded in segments in research project at Martin Co. p. Pr Oct 187
Now It's an Agonizing Reappraisal of the Moon Race. Richard A. Smith reviews growing doubts about space program with prospect of drastic realignment in next two years, especially Apollo moon project. Congress, concerned over rising cost, cuts NASA budget. Military value, distortion of scientific effort, and slight "fall-out" of commercial products discussed. Overly-independent key men in development centers hinder work. Cape Canaveral Vertical Assembly building. c.p. Nov 124-129, 268-280
Mapping the Face of the Moon. Portfolio with short report on preliminary geological and topographical maps of giant map-making project of Air Force's Aeronautical Chart and Information Center and U.S. Geological Survey for NASA to map entire surface of moon in detail for first instrumented Ranger and Surveyor probes. Nov 130-133
Unmanned "lunar roving vehicle" to be boosted by Saturn V rocket and fitted with stereo-television cameras being developed by Westinghouse. Photometric diode of silicon, a transistor-like device to detect and carry signals on less than one-billionth of a watt transmitter, developed by Sperry Rand Research Center. p. Pr Nov 192, 196
Computer-controlled welding fixture used to weld aluminum panels into Saturn S-IVB fuel-tank sections for the Apollo moon-shot rocket, built by Pandjiris Weldment Co. and Union Carbide for Douglas Aircraft Co. p. Pr Dec 188

SPACE TECHNOLOGY LABORATORIES See THOMPSON RAMO WOOLDRIDGE INC.

SPAIN

Embryo of a Miracle. Economy surges forward with release of private enterprise from Franco regime's rigid government controls. New four-year economic development plan to increase production six percent annually being drafted. Two Cabinet members pressed reform following 1959 inflation crisis. Fiscal stabilization program effected to meet demands for foreign loan-and-credit package. Gap between urban industrial growth and agricultural lag remains problem. p. BG Nov 93-94

Eduardo Barreiros Rodriguez skyrockets from mechanics' shop to control of Barreiros Diesel, S.A., sixth-largest industrial corporation in Spain, in little over a decade. Joint Gulf Oil service station chain project, Chrysler deal, family management discussed. p. BG Nov 94

SPATTA, GEORGE See CLARK EQUIPMENT CO.

SPECTRUM, ELECTROMAGNETIC See LASERS

SPECULATION See INVESTMENTS

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SPERRY, ROGER W. See MEDICINE Feb 129

SPERRY RAND CORP.

See also BUILDING Mar 90; MARTIN MARIETTA CORP.

George M. Bunker president Martin Marietta Corp. buys into Sperry Rand Corp., gets board post. p. BM Jun 56

SPLICING CLAMPS See CLAMPS

SPRAYING EQUIPMENT See AGRICULTURE—EQUIPMENT

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STAFFORD, C. D. W. See DRUGS Dec 127

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STALEY, KENNETH E. See GENERAL MOTORS CORP. Jun 111

STANDARD OIL CO. (NEW JERSEY)

See also ANTITRUST Dec 140; HUMBLE OIL & REFINING CO.; MEDICINE; OIL—INDONESIA Aug 79

How Rathbone Runs Jersey Standard. Walter Guzzardi Jr. describes how President and Chief Executive Rathbone presides over daily affairs of world's largest oil company; imperturbable style, independent decision making, handling of executive committee meetings, conferences noted. Reorganization, board of directors changes, Humble Oil new project, big earnings increase discussed. Jan 84-89, 171-179

STANDARD OIL CO. OF CALIFORNIA See OIL—INDONESIA Aug 79

STANVAC INDONESIA See OIL—INDONESIA

STAPLING & TACKING MACHINES

Electric staple tacker for use on hardest woods developed by Fastener Corp. p. Pr Mar 167

STAR-KIST FOODS, INC.

President Joseph Bogdanovitch announces company's purchase by H. J. Heinz Co. through exchange of stock. p. BM Apr 52

STARS See PLASMA (IONIZED) Aug 131

STATE DEPARTMENT See UNITED STATES—FOREIGN RELATIONS Jul 130, Aug 82

STATISTICS

"Reliability" Engineering. George A. W. Boehm reports on new approach in quality control, basic concepts employing reliability number derived from testing and statistical mathematical probability, diagram. c.p. Apr 124-127, 181-186

"Qui Numerare Incipit Errare Incipit". Oskar Morgenstern analyzes inaccuracies in economic statistical data, margins of error and deliberately false figures on prices, unemployment, national income, production released by government agencies and others, invalidating economics as a true science (table); stresses need to publish minus or plus margins with estimates. Article is condensation of forthcoming book *On the Accuracy of Economic Observations*, a complete revision of *Theory of Games and Economic Behavior*. Oct 142-144, 173-180

STEAM-ELECTRIC POWER See ELECTRIC POWER

STEAMSHIP LINES See GRACE, W. R., & CO.; SHIPPING

STEDMAN, SAMUEL See LOEB, CARL M., RHOADES & CO. Apr 131

STEEL

See also CAPITAL INVESTMENTS Feb 208; INDIA; INVENTORIES; LABOR May 113

Bethlehem Steel announces new integrated finishing plant at Burns Harbor, Ind. to open in two years. Midwest market move follows Justice Department denial of Youngstown Sheet & Tube merger. BM Jan 40

Electric crane which weighs sheet steel while unloading from flatcars built by Crane Division of Novo Industrial Corp. p. Pr Apr 159

Balance of Prices. Perspective on price increases with steel rise underlines firming trend in industrial levels. BR May 48, 50

U. S. Steel joins move of five steel companies to raise prices. Kennedy Administration caught by surprise. p. BM May 76

No Dumping Allowed. U.S. steel companies lodge dumping complaints against European and Japanese producers of cold and hot rolled steel, wire rod, standard steel pipe, wire mesh to curb low-priced imports. Adverse reaction including importers' reprisals noted. Treasury and Tariff Commission strictly interpret the anti-dumping law to prevent abuses, throwing out numerous complaints. Number of attempts to strengthen law. Changes in export sales, leading product categories cited. 1952-62 table. p. BG May 87-94

What Went Right. Editorial reviews U.S. economy's optimistic turnaround since gloomy spring of 1962, Kennedy Administration's new let-alone approach toward business, reasonable reaction to 1963 steel price move. Exaggerated inflationary fears were factor in Kennedy's 1962 steel-price intervention. May 103-104

Charles M. Beeghly new chairman and chief executive of Jones & Laughlin Steel Corp. one of assets of Cold Metal Products Co. merger in 1957. Company's position strong with advanced technology keeping down costs, and concentration on flat-rolled steel offsetting foreign competition. Share of basic steel market increases. BM Jun 53

First commercially operated continuous casting plant in U.S. steel industry, designed and made by Babcock & Wilcox Co., goes into operation at Roanoke Electric Steel Corp. p. Pr Jul 215

Armco's new computer-controlled 160-inch mill to roll slabs and plates by using changeable rolls, built by Mesta Machine Co. Bethlehem's new eight-inch-bar mill with coiled billet straightener and high-speed induction furnace replacing two old mills built by Birdsboro (Pa.) Corp. Forged-steel crankshaft for world's largest reciprocating compressors built by Clark Bros. for Union Carbide. p. Pr Aug 174

Ernesto Manuelli, president and general manager of Italy's Finsider, a partly government-owned giant steel complex, directs big expansion program to double output to meet growing consumption and exports markets. BG Oct 76

Steel Company in the World of Culture. Portfolio of examples and notes on distinguished design and fine arts program of Italy's largest steel company, state-controlled Italsider. Oct. 138-141

Giant flue made by Phoenix-Rheinrohr of Germany carries fumes from oxygen converter to the cleaning installation and cools the gases on the way. Nine miles of pipe, welded together lengthwise, hold water which not only cools the gases but produces steam for power. p. Pr Nov 192

Oversized fork lift type of one-man stacking crane which picks up steel sheets and stows them in warehouse bins made by Conco Engineering Works, Inc. Versatile steel molding "carrousel" developed by Amsted Industries, Inc. is used by Eastern Stainless Steel Corp. p. Pr Dec 187, 188

STEINIGER, EDWARD L. See SINCLAIR OIL CO.

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STERILON CORP. See GILLETTE CO. Jul 248

STERLING FOREST See BUILDING Jun 131

STEVENS, J. P., & CO., INC.

Durable Threads of J. P. Stevens. Richard J. Whalen reviews success of oldest and second-largest U.S. textile company on 150th anniversary. Chairman-President Robert T. Stevens, in direct-line family management, adheres to policy of adapting to constant change with diversified line. Mergers include Utica-Mohawk Mills, Forstmann Woolen. Research and development, ventures in nonwoven materials, move South, entry in European market, 1962 sales record noted. Apr 102-109, 170-176

STEVENS, ROBERT T. See STEVENS, J. P., & CO., INC.

STEVENSTEN CATE N. V. See STEVENS, J. P., & CO., INC. Apr 174

STOCK BROKERS See BROKERS; INVESTMENT BANKING; STOCK MARKET

STOCKHOLDERS See CORPORATIONS

STOCK MARKET

See also INVESTMENTS

What Price Earnings? Discusses merits of price-earnings ratios as standard for stock values; historic norm theory based on Dow-Jones industrial average data outdated by growth economy since 1950, 1926-62, chart; how to evaluate stock prices in relation to earnings based on company's expected growth rate and rate of investment return. PI Jan 184, 186

Random Walk in Wall Street. Princeton University study by Clive W. J. Granger and Oskar Morgentsern testing merits of stock indexes and employing highly-sophisticated technique of spectral analysis, supports random walk hypothesis of short-term unpredictable price fluctuations and finds no relationship between price and volume. PI Feb 204

Along Throgmorton Street. London Stock Exchange undergoes changes, becomes more professional. Lord Ritchie, chairman of governing council, steps up reforms, new regulations. New building plan opposed by minority group of small brokers disgruntled over decline in world trading, short-term capital gains tax, stamp duty, investment tide in favor of big institutions. British federation of exchanges promoted. p. BG Apr 70, 74-76

Rise of the Shorts. Reviews increase in speculative short selling, risks, "squeeze," "buy-in," "corner," new more sophisticated operations including "selling against the box" for tax savings, arbitrage in stocks of merged corporations, investment companies' strategy. Wall Street professionals, Roy Neuberger also art collector noted. PI Apr 205-212

Roasting in U.S. Smelting. Brief report on how position of short sellers in U.S. Smelting has been troubled with proxy fight, insurgent stockholders' buying of stock and subsequent price rise, sudden price drop after company's earnings statement for 1962 showed big decline, risks, paper losses. PI Apr 210

Road to 10-K. Reviews SEC recommendations in Special Study of Securities Markets for strict regulation of over-the-counter companies, requiring all companies with over 300 stockholders to file 10-K reports on corporate data. Insiders to be subject to listed-stock rules; short selling banned. Table on over-the-counter companies, 1962 sales, market value of stock, number of shareholders. PI May 231-232

Speculating on Spectaculars. Discusses how to evaluate speculative motion-picture-company stocks, special problems in estimating realistic book value. Series of epic, big-budget, heavily ballyhooed films in 1963 revives market. PI May 232-236

Why the Rails Are Hot. Explains upsurge in rail stocks since late 1962 due largely to progress against featherbedding, mergers, increased traffic with lower rates, new special-purpose equipment, ICC's controversial ac-

counting ruling establishing new depreciation guideline. Trend in rail stock prices, 1953-63 chart. PI Jun 203-206

Where Are the People? Public's nonparticipation in broad stock-market surge of recent months in line with long-term decline. Increase in institutional share, especially by common trust funds is indicated in N.Y.S.E. periodic checks of floor transactions, odd-lot market shrinkage, Monthly Investment Plan rate. PI Jun 208

Question of Skill, Not Scandal. Editorial appraises second installment of SEC special sudy of the securities market; chief allegations leveled at professional standards of service and competence, unreliable over-the-counter price quotations. Report contends specialists do not stabilize market, calls for end of floor traders, fails to establish existence of widespread corruption demanding drastic reform. Aug 92

Measuring the Over-the-Counter Market. FORTUNE'S test of National Quotation Bureau's index of over-the-counter industrial stock prices and survey of market shows price fluctuations more variable than for listed stocks; value concentrated in a few big issues. PI Sep 232

Monopoly on Front Street. National Quotation Bureau, headed by Louis Walker, is only nationwide source of over-the-counter stock quotations as classified advertising publisher of quotation-sheets subscription service for broker dealers. Bureau policies advertisers for reliability. Big increase in listings since 1950 reflects growth of public interest in over-the-counter market. Findings of recent SEC report. PI Sep 232-236

Ride on the Rails. Chronology of frantic burst of stock market trading in rail stocks, touched off by series of confusing midafternoon announcements on threatened rail strike, illustrates emotional character of stock market and pitfalls of buying on "news." SEC report on floor traders blamed by brokers. Chart shows typical trading patterns of rail stocks. PI Oct 231-232

Big Disappearing Act. Straight preferred stocks of industrial companies which are rapidly being retired at attractive prices, offer a profitable opportunity for individual investors. Spencer Trask & Co. annual statistical survey and New York Stock Exchange monthly report listing companies' acquisitions of their own stocks are reliable guides on choosing issues. Some preferreds that may be called or recapitalized; table. PI Dec 231-232

Shopping the Big Stores. Common stocks of department-store chains reflect junior-grade growth situation due to relatively low yields. Despite prospects for peak Christmas trade and banner 1964 with tax cut, investor is advised to assess long-term performance and uneven profits record due to costly expansion programs. PI Dec 232, 234

STOCKS See INVESTMENTS; STOCK MARKET

STOKES, LEONARD R. See CATERPILLAR TRACTOR CO. Jul 202

STOLLER, EZRA, ASSOCIATES See PHOTOGRAPHY Mar 102

STORAGE See AGRICULTURE—EQUIPMENT; FREIGHT

STORAGE TANKS See RAILROADS—EQUIPMENT

STORES

Pinching 500,000,000,000 Pennies. Reports changes in conservative A & P's selling strategy, management to offset decline in growth rate, market share due to competition of other big food chains, regionals, independents under pressure of directors and Hartford heirs. John Ehrgott new president replaces Ralph Burger protégé of George and John Hartford, who laid down simple precept to sell volume low-priced quality foodstuffs. Sales compared to other chains, 1950-62, chart. c.p. Mar 104-109, 170-180

John D. Ehrgott succeeds Ralph Burger as head of Great Atlantic & Pacific Tea Co. BM Jun 58

Eli G. White, promoted president of Endicott Johnson Corp., buys Kirby Shoe chain to expand in Far West. BM Sep 60

Squeeze on Shopping Centers. Katharine Hamill explores special economics of shopping centers, difficulties pressing developers, rising operating costs, shrewd negotiations of big retailer-tenants for low rents, investment return decline, intense competition of downtown stores and discounters, danger of overbuilding. Steps in developing a strategic site, promotion innovations discussed. c.p. Sep 116-118, 238-239

Who's to Blame for Riklis?—Riklis? Stanley H. Brown reviews setbacks of Meshulam Riklis as board chairman of Rapid-American Corp. and McCrory Corp. with huge debt due to failure to realize projected earnings and McCrory conflict-of-interest stockholder suits. Series of complex transactions to assure creditors include McCrory stock buying and liquidation of money-losing divisions. Chart shows drop in 1962-63 stock price. Oct 136-137, 236-240

Shopping the Big Stores. Common stocks of department-store chains reflect junior-grade growth situation due to relatively low yields. Despite prospects for banner 1964 with tax cut, investor is advised to assess long-term preformance and uneven profits record due to costly expansion programs. Locations and sales, volume of top six chains, maps. PI Dec 232, 234

STORK, NELSON J. See BUSINESSMEN—EUROPE Aug 99

STRAPPING See PACKAGING

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STRIKE, CLIFFORD S. See MCGRAW, F. H., & CO.

STRIKES See LABOR

STUART, ROBERT See NATIONAL CAN CORP.

STUDEBAKER CORP.

President Sherwood Egbert buys control of Domowatt, S.p.A., Italian manufacturer of refrigerators and washing machines, placing Franklin appliance division in position to take advantage of growing market in Europe. p. BM Mar 52

SUBMARINES See SHIPBUILDING

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SUGAR

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Coping with the High Price of Sugar. Estimates effects of price rise on big users of sugar. Most large buyers have superior "feel" for market and carry adequate inventories. Smaller companies hit by speculation. Company tonnages, table. PI Aug 215

First outdoor beet-sugar refinery, geared to bulk handling of the refined product by rail and truck, goes into operation at Spreckels Sugar Co. in Mendota, California. p. Pr Sep 174

SUGARMAN, TRACY See ART

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SUN See SOLAR ENERGY

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SUNFLOWER PROJECT See SOLAR ENERGY

SUN OIL CO.

Strange Case of Sun Oil. M. R. Lefkoe reviews six-year-old FTC case involving discriminatory discount to franchised dealer to meet independent station's price war. Supreme Court decision upholds FTC against lower court's ruling for Sun Oil. Aug 117, 158, 163

SUNSCOPES See ASTRONOMY

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SUPERMARKETS See STORES

SUPERSONIC TRANSPORT PLANES See AIRCRAFT INDUSTRY

SUPPLY & DEMAND

See also CONSUMER SPENDING; INVENTORIES

New FORTUNE index of industrial pressure, 1955-63 chart. BR Jun 39

FORTUNE index of industrial pressure up 1 percent. BR Dec 49

SUPREME COURT See ANTITRUST

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TAMPELLA, OY-AB

Ake Kihlman, chief executive of one of Finland's leading industrial complexes, urges Finland to reduce trade barriers. Kihlman has set notable record in reshaping Tampella as international organization in wood products, machinery, textiles, emphasing exports in open competition. Domestic operations noted. p. BG Aug 80

TANK CARS See RAILROADS—EQUIPMENT

TANKERS See SHIPPING

TANKS, STORAGE See RAILROADS— EQUIPMENT

TAPCO DIVISION See THOMPSON RAMO WOOLDRIDGE INC.

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TAPE RECORDER, TELEVISION See TELEVISION

TARIFF COMMISSION See UNITED STATES—FOREIGN TRADE

TARIFFS See EUROPE; UNITED STATES—FOREIGN TRADE

TAXATION

See also STOCK MARKET

Who's That on Our Flank? Editorial endorses Administration's 1963 tax cut proposal despite risk of another deficit. p. Jan 68

Real Case of a Tax Cut. Max Ways reviews economic premises for revising U.S. tax structure, particularly Kennedy Adminisration's legislation to cut excessive corporate and personal income rates, probable revenue loss, deficit increase. Present tax system stunts free economy's growth, needs improved collection methods, loopholes closed. Sampling of consensus favoring reform noted. Chart projects taxes in relation to federal budget receipts based on $900 billion G.N.P. in 1972. Jan 72-75, 188-198

How to Save the Tax Cut. Editorial urges Republicans to rally congressional support for tax revision and budget consistent with actual economic conditions, amending President Kennedy's programs. Recommends less steep tax gradient in lower bracket. Mar 79-80

Passing on the Ransom. Editorial on General Foods Corp. statement to stockholders explaining cost of donation of food products as ransom for Cuban prisoners, treated as tax deduction. Apr 84

You May Think the Corporate Profit Tax Is "Bad," But . . . Gilbert Burck analyzes real defects of corporate income tax neglected in Kennedy Administration tax program, stultifying economy and distorting economic policy decisions; suggests liquidation of tax and outlines initial reform steps, tied in with personal income tax and capital-gains tax inequities. Opinions of tax authorities, including Henry C. Simons, cited. Apr 86-89, 229-240

Depletion: What's at Stake for Thirty Companies. FORTUNE estimate of oil depletion allowances of 30 largest U.S. oil companies, total and per common share, based on estimated production revenues, net sales percentages, table. PI Apr 206

How Good Is the Kennedy Style? Editorial criticizes President's economic approach in public discussion on tax-cut proposals, and deficit issue as incoherent. Jun 91-92

Some Companies That Were Affected by 1963 Tax Changes. New IRS depreciation guidelines and seven percent investment credit measure have differing effects on reported corporate profits. Sample from 500 largest industrial corporations' profits suggests effects of two changes on aggregate profits offset each other. Table. PI Jul 262

Long Step Backward. Short editorial notes President Kennedy's proposal for tax on foreign securities as measure to meet balance-of-payments deficit constitutes barrier to outward flow of U.S. investment and leads to direct and specific exchange control undercutting broad U.S. goal of world free trade. Aug 92

Dream Businessmen Are Losing. Editorial points out progress toward multilateral international commerce and investment is jeopardized by U.S. expedient measures now under discussion to meet adverse balance of payments. Sep 91-92

Tax Device to Stem the Outflow of Gold. Gaylord A. Freeman Jr.'s letter to Congressman Herman T. Schneebeli recommends reduction in corporate income tax as incentive to increase exports as alternative to devaluing dollar to meet decline in gold supply. Sep 94

Investing in Insurance. Life insurance is rediscovered as an investment with sales booming, big gain in first half of 1963, rising demand for cash-value policies due to special tax advantages, IRS enforced collection of tax on dividends, interest previously evaded. PI Sep 229-232

U.S. Payments Policy. Michael A. Heilperin reports European central bankers' reaction to U.S. measures to meet balance-of-payments deficit, including President Kennedy's proposal to tax foreign securities sold in U.S. Screening of foreign issues suggested as alternative, considered form of exchange control by U.S. experts. BG Oct 81-82

Need for a Hot Line. Editorial points out excess corporate capital being reinvested in rash of strange mergers due to tax system which encourages cash accumulation through depreciation and discourages stockholders from pressing for larger dividends; urges sharp cuts in income tax rates with Justice Dept. and FTC endorsing tax reform and establishment of "hot line" with Treasury. Nov 119-120

Let's Not Lose the Tax Cut. Editorial endorses passage of pending Senate bill to lower corporate and individual tax rates to pave way for more drastic tax reform. Notes Republican Senators face difficult decision involving support of prestige victory for Kennedy in Congress and more important economy's long-range need. Nov 120

Kennedy Administration proposes tax on purchases of foreign securities to stem outflow of capital, cut balance-of-payments deficit. BR Dec 56

TAYLOR, ELIZABETH See MOVIES

TEAMSTERS, INTERNATIONAL BROTHERHOOD OF See LABOR May 113

TECHNICIANS, MISSILE See MISSILES & ROCKETS

TECHNOLOGY PROGRAM, CIVILIAN INDUSTRIAL See RESEARCH

TELEFUNKEN See ELECTRICAL EQUIPMENT Sep 162

TELEPHONES

Push-button phone, which works twice as fast as conventional dial model, made by Stromberg-Carlson Division of General Dynamics Corp. for Mid-Continent Telephone System. p. Pr Feb 169

TELESCOPES See ASTRONOMY

TELEVISION

See also ADVERTISING

FCC will investigate programing of Omaha's three stations by questioning viewer witnesses. Chairman Newton Minow will face LeRoy Collins president of National Association of Broadcasters at hearing. BM Jan 46

Closed-circuit TV system aids riveters attaching skirt assemblies to Titan missiles, cutting processing time at Martin Marietta, p. Pr Mar 159

Precision Instrument Co.'s new portable tape recorder can record 96 minutes of TV broadcasts on one reel of one-inch-wide tape. p. Pr Jun 180

Giant television tower of reinforced concrete topped by a steel mast for the antennas being building in Belgrade, Yugoslavia by RAD. Has seven stories, three enclosed in glass and aluminum and four that are open terraces. p. Pr Aug 173

Physicist Maurice Ponte is president of France's largest electronics manufacturer, which stands to prosper if SECAM (memory sequential system) wins current Western Europe debate on choice of color television system over NTSC method. BG Sep 76

Outlook for big increase in 1963 color sets sales due to price cut. BR Oct 44

TELFAIR, PETER See IRON

TEMPERATURE TECHNOLOGY See NORTON CO.

10-K REPORT See SECURITIES & EXCHANGE COMMISSION

TENNESSEE COAL & IRON DIVISION See UNITED STATES STEEL CORP.

TENNESSEE GAS TRANSMISSION CO.

Chairman Gardiner Symonds indicates plan to buy Heyden Newport Chemical Corp. for stock worth $50 million. p. BM Jul 106

TENSION See BRAIN

TENTS See FREIGHT

TERM INSURANCE See INSURANCE

TESTING

See also DRUGS; QUALITY CONTROL; SPACE

New leak detector, translating ultrasonic vibrations into audible sounds, to test compartments in spacecraft and ships, pressurized telephone cables, vacuum tower assemblies, hydraulic systems, and oxygen, helium, and hydrogen tanks, made by Delcon Corp. Vanadium analyzer to detect changes in vanadium content of crude-oil samples made by Varian Associates on license from Gulf Oil. p. Pr Jan 148, 155

Precision gear checker which measures angular error of gears imported from West Germany by Kurt Orban Co., Inc. p. Pr Jul 218

SOLIDprep Sampler using techniques developed by Merck Sharp & Dohme and equipment made by Technicon Controls, Inc. automatically tests pellets, tablets and other pharmaceuticals in solid form. p. Pr Sep 179

Polaris motor casing made of glass epoxy and rubber are inspected by boom-mounted instrument package made by Magnaflux Corp. for Aerojet General. p. Pr Oct 187

Electromagnetic inspection system for aluminum drill pipe defects at the drilling location or in the factory made by Tuboscope-Alscan Inspection service. p. Pr Nov 192

TEXACO See OIL Feb 100

TEXAS GULF PRODUCING CO.

Chairman Gordon W. Reed announces agreement on sale of domestic and foreign oil and gas properties to Sinclair Oil Co. p. BM Oct 60

TEXAS GULF SULPHUR CO.

Company will become one of major producers of muriate of potash when mine at Moab, Utah with highly-automated warehouses and loading facilities goes into production. f.p. Pr Sep 173

TEXAS NATURAL GAS CO. See LOEB, CARL M., RHOADES & CO. Apr 150

TEXTILES

See also INDIA; JONATHAN LOGAN, INC.; LABOR Nov 176

Durable Threads of J. P. Stevens. Richard J. Whalen reviews success of oldest and second-largest U.S. textile company on 150th anniversary. Direct-line family management adheres to policy of adapting to market changes. Research and development, joint ventures in nonwoven materials, plastic fibers, move South, entry in European market, computerized inventory discussed. Processing methods shown. c.p. Apr 102-109, 170-176

TEXTILE WORKERS UNION See LABOR Nov 176

TF-30 (ENGINE) See AIRCRAFT INDUSTRY

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THOMAS, CHARLES A. See MONSANTO CHEMICAL CO.

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THOMAS, ROBERT See MEDICINE Feb 192

THOMPSON PRODUCTS See THOMPSON RAMO WOOLDRIDGE INC.

THOMPSON RAMO WOOLDRIDGE INC.

Thompson Ramo Wooldridge: Two Wings in Space. Robert Sheehan reviews company's founding as government contractor in space technology and electronic hardware, and merger with Thompson Products, old automotive- and aircraft-parts maker of Cleveland. Independent subsidiaries include Pacific Semiconductors, Space Technology Labs., (some units divested to form Air Force's nonprofit Aerospace Corp.), and Tapco. 1962 sales and income record, 1970 goal noted. Wooldridge resigns as president. Sunflower solar power conversion device shown. c.p. Feb 94-99, 134-146

THORNTON, CHARLES B. See LITTON INDUSTRIES

THOURON, HENRY A. See HERCULES POWDER CO.

341st STRATEGIC MISSILE WING See UNITED STATES—DEFENSES

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TILLINGHAST, CHARLES C., JR. See AIR LINES

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TIME ZONES See TRAVEL

TITAN MISSILES See MISSILES & ROCKETS

TITTMANN, EDWARD McL. See AMERICAN SMELTING & REFINING CO.

TOBACCO

Embattled Tobacco's New Strategy. Analyzes tobacco industry's current problems, including renewed pressured on health hazard of cigarette smoking, new fragmented market, brand switching, slackening sales, 1952-62 decline in net profits and production, 1962 leaders (charts). Increasing costs, threats of broader government regulation, and differing strategies of six major companies to meet situation discussed. Prospect for increased smoking with population change noted. Opinion of Industry Research Committee cited. Jan 100-102, 120-131

Robert B. Walker promoted president and chief executive officer of American Tobacco Co., succeeding Paul Hahn who is retiring. p. BM Apr 56

Zach Toms, president of Liggett & Myers Tobacco Co., named chief executive. Toms counts on new ad agency and new brand to stem sales decline. p. BM May 75

TOKYO, JAPAN See JAPAN

TOMATO HARVESTER See AGRICULTURE—EQUIPMENT

TOMS, ZACH See LIGGETT & MYERS TOBACCO CO.

TONI CO.

See also GILLETTE CO.

Market counteroffensive against Colgate's new home permanent noted. **Soap Wars: A Strategic Analysis.** Jun 186, 191

TOOTHPASTE See PROCTER & GAMBLE CO.

TOQUEPALA MINE See MINES & MINING

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TOWNES, CHARLES H. See LASERS Jun 142

TOWNSEND, LYNN See CHRYSLER CORP.

TOXICITY See DRUGS

TOYS

Playing the Toys. Big sales increase in toys for 1963 over 1962 indicated. Emergence of large stable toymakers with young, aggressive managements applying new concepts in production, marketing, diversification, research and development during past five years enhances investment appeal of toy-industry stocks. Clues for investors on manufacturers' position are mid-March Toy Fair and Sears, Roebuck Christmas catalog. PI Nov 250

TRACKSON CO. See CATERPILLAR TRACTOR CO.

TRACTORS

See also BARREIROS DIESEL, S.A.; CATERPILLAR TRACTOR CO.; EXCAVATING MACHINERY

Remote-control tractor shovel carries red-hot slag from open-hearth pit to the dump. Remote-control gear made by Westinghouse Air Brake Co. p. Pr Mar 162

World's biggest tractor built by White Motor Co. for Arizona Public Service Co. Beach-cleaning machine pulled by small tractor with vibrating screen, made by Beemer Equipment Co. p. Pr May 191

Lightweight power train for experimental tractor, consisting of diesel-driven hydraulic pumps that power torque multipliers in wheels, developed by B. F. Goodrich Co. p. Pr Dec 190

TRADE See under countries—FOREIGN TRADE; COMMON MARKET

TRADE CREDIT See CREDIT

TRADE SECRETS See ETHICS

TRADE UNIONS See LABOR

TRADING COMPANIES See GRACE, W. R., & CO.

TRAILERS See TRUCKS & TRUCKING

TRANSCONTINENTAL WORLD AIRLINES See AIR LINES

TRANSFER MACHINES

Tape-controlled transfer machine which can be programed to handle wide variety of products, including taking packages from a conveyer line and putting them into shipping cartons, made by A.M.F.'s Automatic Equipment Dept. p. Pr Jul 224

TRANSISTORS See MEDICINE Sep 130

TRANSITRON ELECTRONIC CORP.

Interest in Transitron. Editorial points to inadequate statutes governing personal investments of government personnel as disclosed in Senate hearing on SEC Chairman William L. Cary's personal holdings of Transitron, glamour stock which suffered big price drop in 1961-62. Mar 80

One for the Books. Recent settlement of stockholders' suit led by Marvin Cherner against company points up severity of SEC regulations on prospectuses. Court rules corporation, its directors, officers, founders Bakalar brothers, and underwriters are liable for stock offerings in prospectus. Case turns on '61 Western Electric patent suit. Mutual funds also join suit. Settlement terms cover losses for stock bought in limited price range only, chart. Box analyzes complex insurance arrangement. PI Mar 191-196

TRANSMISSION TOWERS See ELECTRICAL EQUIPMENT

TRANSPORTATION

See also AIR LINES; AUTOMOBILES; RAILROADS; SHIPPING

Fortune Directory. Annual review of 50 largest U.S. transportation companies, 1962 rank in operating revenues, assets, net income, capital, table. Aug 147

TRANS WORLD AIRLINES See AIR LINES

TRAVEL

See also AIR LINES

On the Road from Idlewild. Editorial speculates on returning vacationer's reflections when he comes back to the affluent, thoroughly industrialized and rapidly-changing U.S. civilization with its confusion and congestion. Oct 97-100

What Jet Travel Does to Your Metabolic Clock. Samuel W. Bryant reports on mental and physical disorientation caused by jet travel across time zones. As malaise becomes increasingly problematic to continent-hopping businessmen and diplomats, medical researchers probe possible means of synchronizing man's body cycles; chart, diagram. Nov 160-163, 183-186

TRAVELODGE CORP. See HOTELS Jul 164

TREASURY DEPARTMENT See SILVER; STEEL

TREES See AGRICULTURE—EQUIPMENT

TREFETHEN, EUGENE See KAISER INDUSTRIES CORP. Apr 93

TRENCHERS See EXCAVATING MACHINERY

TRIPPE, JUAN See AIR LINES

TROAST, PAUL L. See KRESS & CO.

TROUT See FISH & FISHING Dec 136

TRUCKS & TRUCKING

See also BARREIROS DIESEL, S.A.; LEASES & RENTALS; RAILROADS Jun 206; TRACTORS

Self-propelled carrier designed to load and unload semitrailers on flatcars with lifting capacity of 30 tons and able to select a container from the middle of a car made by Towmotor Corp. p. Pr May 162

Side loader, designed and built by Dempster Brothers, Inc., mounted on truck chassis, has two arms which pick up a container from flatcar and load it on trailer. Selfpowered concrete trailer, which can be left on site while truck is off on another job with bogie axle, made by Blaw-Knox Co. p. Pr May 186-191

TRUSTS, INDUSTRIAL See ANTITRUST; JAPAN

TSENG TSZE-LEE See CHINA, NATIONALIST Jul 153

TSHOMBE, MOISE See CONGO Feb 84

TUBACH, WALTER See IRVINE CO. Nov 252

TUNA FISH See FISH & FISHING

TUNG-SOL ELECTRIC INC.

Frank J. Ehringer elected president and chief executive as move to lift declining sales after Purolator Products Inc. merger negotiations broke down. p. BM Sep 60

TUNGSTEN

High-purity tungsten process turning ordinary tungsten, virgin metal or scrap into gas and then reducing it to granular form, which can be formed into bars, sheets, or billets, developed by Allied Chemical Corp., tested in rocket nozzles. p. Pr Dec 188

TUNNELS See ROADS

TUOHY, WALTER J. See RAILROADS

T.W.A. See AIR LINES

TWENTIETH-CENTURY FOX FILM CORP.

See also LOEB, CARL M., RHOADES & CO.

Cleopatra's Prospects. Assesses potential profits of most costly and publicized new motion picture starring Elizabeth Taylor. Optimistic estimate of breakeven point doubted by motion-picture men. String of new films at total cost of $50 million scheduled. PI May 234

TYPEWRITER PAPER See PAPER

TYPEWRITERS See SINGER CO. Dec 146

U

U.A.W. See LABOR

U.C.L.A. See COLLEGES AND UNIVERSITIES

UDY PROCESS See IRON

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UNDERDEVELOPED AREAS See ECONOMIC PLANNING; INVESTMENTS, FOREIGN; UNITED STATES—FOREIGN RELATIONS

UNDERWATER EXPLORATION See OCEANOGRAPHY

UNDERWATER HOUSE See OCEANOGRAPHY

UNDERWRITING See INVESTMENT BANKING

UNEMPLOYMENT See LABOR

UNION CARBIDE CORP.

President Birny Mason Jr. named chief executive succeeding Chairman Morse G. Dial, retiring as officer but remaining director. p. BM Jun 58

UNION DES PEUPLES L'ANGOLA See ANGOLA

UNION OIL CO. OF CALIFORNIA

Daniel K. Ludwig shipping magnate buys 15 percent stock interest from Phillips Petroleum. p. BM Sep 66

UNION PACIFIC RAILROAD See RAILROADS

UNIONS See LABOR

UNION SHOP See LABOR

UNION TEXAS NATURAL GAS CO. See LOEB, CARL M., RHOADES & CO.

UNITED AIRCRAFT CORP.

United Aircraft: Success with a Wry Twist. Harold M. Meyers reviews company's rise as No. 1 producer of jet engines and transition in aerospace technologies during past fifteen years. Hard-driving Chairman H. M. Horner faces big debt accumulation and meager profits due to volume of government business. Expansion and acquisitions noted. Divisions include

Pratt & Whitney, Hamilton Standard propellers, Sikorsky helicopters, Norden electronic components. c.p. Dec 110-115, 210-216

UNITED AIRCRAFT OF CANADA, LTD. See UNITED AIRCRAFT CORP. Dec 112

UNITED ASBESTOS COMP., LTD. See AMERICAN SMELTING & REFINING CO. Jan 82

UNITED AUTOMOBILE WORKERS See LABOR May 113

UNITED NATIONS

Ugly Face in Africa. John Davenport reviews U.N. actions in Congo since August 1960; questions whether U.N.'s military role in stemming Katanga independence movement was consistent with principles of U.N. charter. Davenport criticizes U.S. for failure to exert positive influence for rule of law. Feb 84, 214-217

Ralph Bunche, other readers defend U.N. policy in the Congo in letters to editor on FORTUNE article probing U.N. intervention. Apr 20

Little Job in Africa. Editorial criticizes U.N. censure of Portuguese policy in Angola and U.N.'s endorsement of the contentious, Congo-based Union des Peuples l'Angola as good 'nationalist force' despite U.P.A. border raid, threats of further incendiary action; hints Angola may not be ready for independence, notes stabilizing influence of Portuguese in Africa. May 104, 106

UNITED STATES

See also ANTITRUST; government agencies, bureaus and departments by specific name.

On the Road from Idlewild. Editorial speculates on reflections of returning vacationer back to the affluent, thoroughly industrialized and rapidly-changing U.S. civilization with its confusion and congestion. Oct 97-100

Faces and Prices of the National Estate. Portfolio of colored photographs depicts size of national estate, acreage, government-owned public domain. Oct 125-127

Connecticut Valley, Where American Industry Began. Portfolio of drawings by Paul Hogarth shows cradle of U.S. industrial revolution, mass production, early factories still in operation. Dec 116-123

Congress

See also ANTITRUST; SPACE; UNITED STATES—FOREIGN RELATIONS

How to Save the Tax Cut. Editorial urges Republicans to rally support for tax revision and budget consistent with actual economic conditions, amending President Kennedy's programs calling for increased expenditures with deficits until 1967. Mar 79-80

Interest in Transitron. Editorial points up inadequate and fuzzy statutes governing personal investments of government personnel as disclosed in Senate hearing on SEC Chairman William L. Cary's personal stock holdings in Transitron Corp. Mar 80

Former Senator Prescott Bush, top-ranking member of congressional Joint Economic Committtee, returns to Brown Brothers Harriman & Co. as partner. p. BM May 82

"Medicare," the Cure That Could Cause a Setback. Harold B. Meyers examines Kennedy Administration's 1963 program for old-age health insurance linked to social-securtiy system. King-Anderson bill exceeds needs. Outlook for legislation appraised. May 131-133, 167-179

Inaction on 1962 aid-to-higher education bill and President Kennedy's omnibus bill of 1963 discussed in **College Architecture: The Economics and Aesthetics.** May 149-150

Congress expected to enact tax revision. Republicans miss chance to highlight how to cut spending. **How Good Is the Kennedy Style?** Jun 92

Cleaning Up the Farm Mess. Editorial sees wheat farmers' vote against Kennedy crop-control plan a mandate to liquidate government farm price-support program. City Congressmen shifted support of costly price "experiments" to production controls. Republicans urged to start campaign for gradual reversal of federal intervention in farm economics. Jul 132, 279

Big One for Free Enterprise. Editorial endorses AEC plan before Congress for civilian sale of fissionable reactor fuel. Amending present law limiting ownership to government a logical follow-up to steps already taken to encourage competitive use of atomic resources. Sep 92

Let's Not Lose the Tax Cut. Editorial endorses passage of pending Senate bill to lower corporate and individual tax rates to pave way for more drastic tax reform; notes Republican Senators face difficult decision. Nov 120

NLRB's New, Rough Line. M. R. Lefkoe examines new Kennedy-majority Board's use of vast discretionary power in broad interpretation of labor laws infringing rights of management. Congressmen's criticisms noted. Representative Landrum's proposal to turn over judicial authority to courts endorsed. Nov 164-166, 172-178

Congress and the Country Slicker. Editorial on rise and fall of Robert G. Baker from Senate page boy to Secretary of the Senate Democratic majority to operator of assortment of small businesses, influence peddler, and millionaire, points up confused congressional ethics. Dec 101-102

Tranquility of Mind. Short editorial notes failure to act on ethical standards study of bipartisan Senate committee headed by Paul Douglas, and bar-association committee's proposal for thorough investigation of congressional conflict-of-interest shortcomings. Dec 102

Defenses

See also CONTRACTS, GOVERNMENT; QUALITY CONTROL; UNITED STATES—FINANCE

How to Plan to Beat Hell. Oskar Morgenstern suggests foolproof command-control system to meet problem of accidental nuclear explosion with spread of weapons throughout world: safe and reliable nuclear weapon construction, invulnerable communications to supreme authority, the President. Project Needles, a space belt of fine needles, is effective measure. Jan 103, 200-208

Minuteman's New Home on the Montana Range. Portfolio of colored photos shows key nuclear deterrent weapon: solid-fueled Minuteman missile, first of second-generation ICBM's armed with thermonuclear warhead deployed in underground launching silos on Montana prairies. Strict surveillance procedure, electronic controls discussed. 341st Strategic Missile Wing is first of five by 1965, made up of new type of volunteer, hand-picked missile men and command crew. Aug 124-130

Economy

See also BUSINESS ROUNDUP; STATISTICS

"What the Hell Do Those Fellows Want?" Editorial reviews cool climate of business-government relations in view of Kennedy Administration's tendency to employ wide discretionary powers of federal government rather than rule of law. New Frontier pro-business policy moves have been largely ineffective. Feb 81-82

What Went Right. Editorial reviews optimistic turnaround since gloomy spring of 1962, Kennedy Administration's new let-alone approach toward business, reasonable reaction to 1963 steel price move, and tax relief. May 103-104

Mr. Berle's Nostalgia. John Davenport reviews Adolf Berle's *American Economic Republic*, a new rationale and guide on modern economy, criticizing theory that free competitive market system, basis of growth in 19th century, was replaced by state planning after economy's breakdown in 1930's. Jun 94, 236

Finance

See also FOREIGN EXCHANGE; TAXATION

Forecast of defense spending rise for next 18 months; 1957-64 chart. BR Jan 28, Jul 42

Who's That on Our Flank? Editorial endorses Administration's 1963 tax-cut proposal despite risk of another deficit, but points up long-term deficit threat to economic freedom implied in appointment of Harvard economist John P. Lewis, advocate of deficit financing, to Council of Economic Advisers. Jan 68

President's budget calls for break in spending, limiting increase in outlays for fiscal 1963, 1964, bigger 1964 deficit. BR Feb 40

Budget Revisited. Prospect for continuing rise in federal outlays with 1964 spending rate exceeding 1963 by $7 billion. Realistic defense rate depends on accounting procedure. Non-defense outlays expected to increase with new welfare programs. Fiscal 1967 peak of $143 billion projected. 1957-64 trend, chart. BR Mar 44-46

How to Save the Tax Cut. Editorial urges Republicans to rally congressional support for tax revision and budget consistent with actual economic conditions, amending President Kennedy's programs calling for increased expenditures with deficits until 1967 based on Heller-Gordon theory of deficit spending. 1964 budget is misleading on curtailed outlays. Rise in federal spending other than defense, space. 1954-64 trend, chart. Mar 79-80

Spending for Symmetry. Editorial disapproves proposal to establish Civilian Industrial Technology Program with government funds for civilian research and development to correct imbalance favoring military and space projects. May 104

Prospect for fiscal policy change, moderate reduction in revenues, expenditures. BR Jun 40

How Good Is the Kennedy Style? Editorial criticizes President's economic approach in public discussion on tax-cut proposals and Administration fiscal policy, budget, deficit issue as incoherent. Jun 91-92

Balance-of-Payments Bind. Gilbert Burck assesses chronic international deficit now totaling $26 billion, drain on gold endangering dollar due to huge outflow of private capital with domestic fiscal and credit policies peeking interest rates low, 1946-62 charts. Prudent monetary policy suggested. Jun 112-117

Estimates on rise in federal spending, receipts in 1963, 1964, deficit cut. BR Sep 44

Dream Businessmen Are Losing. Editorial points out progress toward multilateral international commerce and investment is jeopardized by U.S.'s expedient measure now under discussion to meet adverse balance of payments. More constructive approach: allow interest rates to rise to natural levels, adopt prudent budget to bolster dollar and re-examine foreign aid outlays. Sep 91-92

Tax Device to Stem the Outflow of Gold. Gaylord A. Freeman Jr.'s letter to Congressman Herman T. Schneebel recommends reduction in corporate income tax as alternative to devaluing dollar to meet decline in gold supply. Sep 94

Question of tightening monetary policy, further rise in short-term rate to safeguard dollar abroad. BR Oct 40

U.S. Payments Policy. Michael A. Heilperin FORTUNE'S European correspondent reports on European central bankers' reaction to U.S. measures to meet balance-of-payments deficit. BG Oct 81-82

Outlook for further rise in federal outlays, receipts; 1957-64 chart. BR Dec 49

Balancing Act. Balance-of-payments position improves somewhat. Third quarter 1963 figures exclude impact of special official measures that cushion the effect of underlying payments on the actual dollar flow. Trend in net balances. 1958-63, chart. BR Dec 54, 56

Foreign Relations

Importance of Latin America's Elite. Deltec Panamerica Director Julio Nuñez (sketch) urges reappraisal of U.S. policy toward underdeveloped nations, especially those in Latin America; points out fallacy of overstressing economic aid to deter Communist appeal, and cites decline in Western leadership as underlying cause for upheaval. U.S. ought to aid in rejuvenating Latin America's elite, encourage them to affect needed reforms within private enterprise framework. Jan 70-210

Depressed Cork. Philip Siekman reports critical situation in Argentina, deepening depression, drifting puppet government, lesson in frustration for U.S. foreign-aid program. BG Feb 65-77

Ugly Face in Africa. John Davenport reviews U.N. actions in Congo since August 1960; questions whether U.N.'s military role in stemming Katanga independence movement was consistent with principles of U.N. charter. Davenport criticizes U.S. for failure to exert positive influence for rule of law. Feb 84, 214-217

Printing-Press Economy. Reports Brazil's big balance-of-payments deficit, price inflation threatening economic chaos. Finance Minister San Thiago Dantas seeks aid. U.S. faces quandary. BG Mar 63-75

Foreign Aid: Billions in Search of a Good Reason. Charles J. V. Murphy reviews new criticisms of foreign-aid program led by three top bankers who charge bilateralism provokes race for markets and political advantage and call for new multinational approach. Congressman Passman and Chester Bowles join attack. Kennedy appoints a committee to investigate. Three new agencies dispense capital. Table shows allocation of funds. David Bell is third new director. Mar 126-130, 205-212

Passing on the Ransom. Editorial notes General Foods Corp. statement to stockholders explaining nominal cost of big donation of food products to Cuban prisoners ransom fund, treated as charitable tax deduction. Apr 84

Our Strongest Ally in the Pacific. Editorial urges new U.S. approach and informed public opinion on strength of Nationalist China, formidable military force ready to liberate Red China. Kennedy Administration policy criticized. Jul 130-132

Sword at the Belly of Red China. Duncan Norton-Taylor reviews phenomenal economic and military development of Nationalist China on Taiwan now ready for invasion of mainland to trigger disintegration of Red regime. Move hinges on U.S. approval. Jul 150-153, 280-284

"A Complete Draw". Reviews agreement signed in Tokyo between three big western oil companies, and government of Indonesia. Feat of economic diplomacy achieved by President Kennedy's special envoy Wilson Wyatt mediating deadlock on critical issues. BG Aug 79-87

New Communist Patterns in Latin America. Charles J. V. Murphy assesses changes in party tactics during past five years, political consequences of Castro regime distinct patterns in three countries aimed at parties and personalities of the constitutionalist center and left; considerations for U.S. policy making. Oct 102-107, 150-168

Foreign Trade

See also AGRICULTURE; CHEMICALS

Forcast exports rise next eighteen months; imports trend. BR Jan 34, Jul 48

U.S. will try to negotiate tariff reductions with EEC countries. Trend in exports and investment with EEC, U.K.; 1957-62 charts. **After de Gaulle's Thunder.** BG Apr 66

No Dumping Allowed. U.S. steel companies lodge dumping complaints against European and Japanese producers of cold and hot rolled steel, wire rod, standard steel pipe, wire mesh to curb low-priced imports. Over the years Treasury and Tariff Commission have strictly interpreted the anti-dumping law, throwing out numerous complaints. Changes in export sales, leading product categories; 1959-62 table. p. BG May 87-94

Insurance for Exporters. FCIA credit insurance program, in partnership with casualty and surety companies, to insure export credits to cover short-term political and commercial risks set up in late 1961 by Export-Import Bank, and broadened in 1962 and 1963. Preference of big exporters and banks for optional guaranty plan is problem. BG Jun 69-76

Balance-of-Payments Bind. Gilbert Burck assesses chronic international deficit totaling $26 billion, drain on gold endangering dollar due to huge outflow of private capital with domestic fiscal and credit policies keeping interest rates low (1946-62, charts). Prudent monetary policy, competitive export prices suggested as relief measures. Jun 112-117

Trade, Property, and the Dollar. Editorial urges U.S. to broaden the international market, reorient trade policy with bolder unilateral approach to tariff reduction, increased protection of foreign investment and property, and work toward free and convertible currencies as major contribution to peace. Jul 129-130

Sturdy Exports. Forecasts favorable turn in trade with export surplus rate and total exports much higher than in 1962, and new Administration fiscal policy narrowing balance-of-payments deficit. Prospects for further gains around the globe discussed. Trend 1956-63, chart. BR Aug 36-38

Long Step Backward. Short editorial notes President Kennedy's proposal for tax on foreign securities constitutes barrier to outward flow of U.S. investment and leads to direct and specific exchange control undercutting broad U.S. foreign-policy goal of world free trade. Aug 92

U.S. exports of wheat, feed grains to Common Market to drop. BR Sep 50

Dream Businessmen Are Losing. Editorial points out progress toward multilateral international commerce and investment is jeopardized by expedient measures now under discussion to meet adverse balance of payments, including increase on chicken tariff to retaliate Common Market move; urges interest rates be allowed to rise to natural level, adoption of prudent budget, and a re-examination of U.S. foreign aid outlays. Sep 91-92

Global State of U.S. Business. Analysis of huge increase in direct overseas investment since 1950 amounting to $37 billion, Kennedy Administration's apprehension over potentially unfavorable effects, widening gap between rich and poor nations due to neglect of newly-developed nations, expansion in Common Market cutting into exports, and eroding balance of payments situation. Foreign concern over economic domination, especially Canada and France noted. Distribution country by country, charts, maps. Dec 129-131

History

History of American Business FORTUNE series published as book *Enterprising Americans* Feb 82

Politics

Here Come the Conservatives. Richard J. Whalen appraises the revival of conservatism, new aggressive power in U.S. politics within the Republican Party, proclaiming the rights of the individual against expanding power of federal government. Intellectual stimulus and historical background discussed. Group of leaders, drawing. Dec 106-109, 238-243

UNITED STATES RUBBER CO.

George R. Vila chief executive of one of U.S. companies exceeding $1 billion sales in 1962. p. BM Apr 58

UNITED STATES SMELTING, REFINING & MINING CO.

Roasting in U.S. Smelting. Briefly reports how position of short sellers in U.S. Smelting has been troubled with proxy fight, insurgent stockholders' buying of stock and subsequent price rise, and sudden price drop after company's earnings statement for 1962 showed big decline, risks, paper losses. PI Apr 210

President Charles G. Rice indicates little prospect of compromise in proxy fight with dissident shareholders headed by Jack Wilder and Louis Beryl. Stock fluctuates wildly. p. BM May 76

Martin Horwitz, Morris J. Rubin, Jack Wilder, and Harold S. Brady, leaders of insurgent stockholder group winning long proxy war, claim they are entitled to four additional board seats with support of majority of common votes. Issue is before U.S. court. p. BM Jul 102

UNITED STATES STEEL CORP.

See also CAPITAL INVESTMENTS Feb 208; STEEL May 88

Company follows move of five steel companies to raise prices, not initiated by Roger Blough, Kennedy Administration caught by surprise. p. BM May 76

Voice from the Dark Ages. Short editorial criticizes Tennessee Coal & Iron Division's use of "economic power" to enforce better race relations in Birmingham as beyond the scope of corporate activity. Notes Roger Blough's rejection of proposal to deal with banks and suppliers favoring Negro advancement, and New York *Times* editorial. Dec 102

UNITED STEELWORKERS OF AMERICA See LABOR May 113

UNIVERSAL AMERICAN CORP.

President Francis S. Levien also becomes chairman of Glickman Corp. Real-estate investment company is major creditor of Louis Glickman founder and former chairman who filed bankruptcy petition. p. BM May 76

UNIVERSAL MATCH CO.

See also VENDING MACHINES

Frank J. Prince, chairman of the executive committee, wins landmark court decree in suit charging that Vendo Co. had conspired with former U.M.C. employees to steal and use trade secrets. p. BM Dec 72

U.P.A. See ANGOLA

URANIUM See NUCLEAR POWER

U.R.D. See VENEZUELA

URETHANE

Portable equipment to dispense urethane foam, consisting of self-contained aerosol pressure tanks and refillable containers, made by United Process Machinery Co. p. Pr Aug 176

URIS, HAROLD D. AND PERCY See URIS BUILDING CORP.

URIS BUILDING CORP.

President Harold D. Uris and Chairman Percy Uris lease newest Manhattan building on Avenue of the Americas to J. C. Penney & Co.; largest multitenant building lease ever signed in New York. p. BM Oct 56

USAMI, MAKOTO See JAPAN Jul 136

USED CARS See AUTOMOBILES

U.S.S.R.

See also COMMUNISM; STATISTICS Oct 173

Soviet-bloc economic aid drive and its competitive effect on U.S. discussed in **Foreign Aid: Billions in Search of a Good Reason.** Mar 205

"This Is the Absolute End". FORTUNE uses Khrushchev speech protesting poor crop on Volgo-Don state farm to illustrate Russian agricultural mismanagement and basic faults in Soviet government planning. Nov 122

UTICA & MOHAWK COTTON MILLS See STEVENS, J. P., & CO.

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VACUUM, HIGH See NORTON CO.

VACUUM CHAMBER PROCESS See PLASTICS

VACUUM FURNACES See FURNACES

VALLETTA, VITTORIO See BUSINESSMEN—EUROPE Aug 99

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VAN CAMP, GILBERT, JR. See VAN CAMP SEA FOOD CO.

VAN CAMP SEA FOOD CO.

President Gilbert Van Camp Jr. and Raymond E. Rowland president of Ralston Purina Co. reach preliminary agreement to merge through exchange of stock. p. BM Apr 52

VAN CLEEF & APPELS See GEMS Jul 264

VANES, JET ENGINE GUIDE See AIRCRAFT INDUSTRY

VAN HOUTEN, C. J. & ZOON See GRACE, W. R., & Co. Aug 111

VAUGHN, WILLIAM S. See EASTMAN KODAK CO.

VAULTS

Where They Keep the Money. Portfolio of colored photographs illustrate how bank vaults, safe-deposit boxes, and locks are made at Mosler Safe Co., biggest firm in flourishing industry. Oct 114-117

VENDING MACHINES

Antique Vending Machines. Portfolio of colored photographs shows vending machines of late 19th and early 20th centuries, dispensing variety of products with style and wit, from three collections owned by Vendo Co., Universal Match Corp. and N.Y. art dealer Frederick Fried. Feb 115-117

VENDO CO. See UNIVERSAL MATCH CO.; VENDING MACHINES

VENEZUELA

New Communist Patterns in Latin America. Charles J. V. Murphy assesses changes in party tactics over past five years, political consequences of Castro regime, three distinct patterns in three countries. Terrorism of F.A.L.N., U.R.D. in Venezuela, and danger of increasing unrest in upcoming election of President Bétancourt's successor. p. Oct 102-107, 150-168

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VIRGINIA-CAROLINA CHEMICAL CORP.

Chairman David K. Wilson announces plan for Socony purchase through exchange of stock. p. BM Sep 64

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WATER

Test tower at Westinghouse Research Labs. used to find a new low-cost, high-efficiency salt-water distillation method. Brackish-water purification plant being built by Chicago Bridge & Iron Co., to be operated by the government. p. Pr May 196

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WAYS, MAX (AUTHOR)

Real Case for a Tax Cut. Reviews economic premises for revision of U.S. tax structure, Kennedy Administration's 1963 tax legislation. Jan 72-75, 188-198

Labor Unions Are Worth the Price. Assesses the importance of American unionism to free market economy with benefits outweighing economic costs. Discusses new wave of antiunionism. May 108-113, 238-254

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Chairman William Zeckendorf struggles to raise cash to pay $68 million short-term debt and $10 million arrearages on rents and mortgage payments. p. BM Jul 108

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Cone-weld fixture developed by Martin Co. to weld fuel-tank sections of Titan II using preshaped aluminum alloy sheets. p. Pr Feb 162

Disposable purge chamber of ten-gauge plastic sheeting and argon gas devised for welding at North American Aviation, Inc. p. Pr Jul 224

Computer-controlled welding fixture used to weld aluminum panels into Saturn S-IVB fuel-tank sections for the Apollo moon-shot rocket, built by Pandjiris Weldment Co. and Union Carbide for Douglas Aircraft Co. p. Pr Dec 188

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WESSMANN, MRS. LUCILLE T.

Lady and the Funds. Edits *Investment Companies, Mutual Fund and other Types* authoritative source book of U.S. investment companies. Mrs. Wessmann also acts as independent consultant to Arthur Wiesenberger & Co. p. PI Nov 248

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Plasma jet's radiation directed through quartz lens in continuous beam of metal-cutting white light developed by Westinghouse Research Laboratory. p. Pr Jul 215

Donald Burnham unexpectedly advanced as president and chief executive over Executive Vice President John K. Hodnette, now vice chairman. Burnham succeeds the late Mark W. Cresap Jr. Gwilym Price continues as chairman. Burnham hopes for sharp rise in profit margins with automation. p. BM Sep 59

WEST VIRGINIA PULP AND PAPER CO.

David L. Luke III succeeds father as chief executive retaining title of president. The elder Luke remains chairman and head of finance committee. p. BM Dec 70

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